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TEACHER ESTIMATES OF THE INSTRUCTIONAL  
READING LEVELS OF THE EDUCABLE  
MENTALLY RETARDED

by



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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "Teacher Estimates of the Instructional Reading Levels of the Educable Mentally Retarded" submitted by Janet Mary Newman in partial fulfilment of the requirements for the degree of Master of Education.



## ABSTRACT

Special class placement for the educable mentally retarded is justified by the belief that such classes provide instructional programs which promote learning, and consequently success experiences. Success in learning to read depends, in part, on the assignation, to the student, of instructional reading materials which approximate his instructional reading level. To assign instructional materials the special class teacher must estimate the instructional reading level of each student. The major purpose of this study was to determine the accuracy of these estimates. Additional purposes included the identification and description of (1) the professional characteristics of the special class teachers, (2) the procedures they employed when assigning instructional materials, and (3) classroom practices and opinions which further describe the special class teacher.

A total of fifteen teachers were the subjects of the study. All were employed by a large urban school board to teach in special classes designated as Junior Opportunity Classes. In addition seventy-five students, five from each teacher's class, were involved.

To determine the accuracy of the teachers' estimates, an informal reading inventory, Graded Selections for Informal Reading Diagnosis Grades One through Three and Grades Four through Six, was administered on an individual basis to each of the seventy-five students. Per cent accuracy scores were computed for word recognition, literal comprehension and interpretive comprehension. Where a student





met the established criteria for instructional level, his teacher was credited with having made an accurate estimate. Teachers with four or five accurate estimates were identified as accurate estimators.

Information concerning the professional characteristics of the fifteen teachers was obtained by means of a Teacher Questionnaire distributed to and completed by each teacher. Details concerning the classroom practices and opinions of the teachers were obtained by means of The Informal Teacher Interview.

The major findings of the study indicated that the teachers did not make accurate estimates of the instructional reading levels of their students when the aspects of word recognition and comprehension were considered jointly. However, the teachers were more accurate in their estimates of instructional level for word recognition than for comprehension. A further finding indicated that the teachers frequently assigned instructional materials which approximated the frustration level of a student.

The findings with respect to the professional characteristics of the teachers indicated diverse professional preparation but similar professional experiences. There were also indications that certain classroom practices and opinions were characteristic of many of the teachers.

The findings of this study gave rise to the general implication that special class teachers do not always assign appropriate instructional materials to their students and the purposes of both



the instructional reading program and special class placement might be adversely affected for many educable mentally retarded students.

Additional implications were considered and suggestions for further research stated.



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## Chapter 1

### INTRODUCTION

Within the elementary school population there exist certain children who, for educational purposes, are classified as educable mentally retarded (EMR). These children are identified by a record of poor academic achievement in the regular grades and an intelligence quotient (IQ) which is at least one standard deviation below the mean. In many school systems EMRs are assigned to self contained classrooms where the pupil-teacher ratio is generally lower than that prescribed for the regular grades.

The establishment and continued operation of these special classes is supported by a belief, on the part of many educators, that such classes provide a situation within which EMRs can perform at a level commensurate with their abilities, and consequently be exposed to successful learning experiences, a phenomenon often denied them in the regular class setting. The degree to which this educational situation is realized, however, must rest ultimately with the teachers of these particular classes. It is the special class teacher who must assess the varied abilities of her students and adjust instructional procedures and provide instructional materials in accordance with these abilities. The majority of special class teachers provide reading instruction for their students and this investigation was concerned with one aspect of teacher behaviour within the context of the instructional reading program.





The instructional reading program is that part of the total reading program which provides for the systematic and sequential introduction and development of reading skills and abilities. The degree to which a student succeeds in this program depends, in part, on the assignation by the teacher, of instructional reading materials (instructional materials) which approximate the instructional reading level (instructional level) of the student to whom they are assigned.

Harris (1961) has described the instructional level as "the highest level at which the child can do satisfactory reading provided that he receives preparation and supervision from a teacher (p. 154)." In terms of specific criteria there is general, though not total, agreement among those in the field of reading that a child is reading materials at instructional level when, without aid from the teacher, he comprehends 70 to 75 per cent of what he reads and accurately identifies 95 to 98 per cent of the words contained in the material. This level maintain Johnson and Kress (1965), is the level at which the child can profit from reading instruction for:

It is in guided work at the instructional level that the child will have the opportunity to build new reading and thinking abilities. Building on the foundation of his previously acquired skill, he can profit from teaching and thus extend his concepts, his word analysis skills and his specific comprehension abilities (p. 9).

It is maintained further by reading authorities that instructional materials, approximating either the frustration or independent reading level of a child, are inadequate for instructional purposes. Materials at frustration level are regarded as too difficult for the reader from both the point of view of word recognition and



comprehension. In contrast, materials at the independent level are too easy and consequently provide few opportunities for the acquisition of new skills and abilities. In short, materials assigned for the purpose of teaching a child to read should be at instructional level if the materials are not to constitute a possible impediment to success.

The assignation of instructional materials is a task which confronts every teacher of reading. The foregoing statements would suggest that this task is of considerable import, and if EMRs in special classes are to experience success in the reading situation it is most essential that the teacher assign appropriate instructional materials. It is certainly imperative that she not assign materials which are at frustration level.

#### STATEMENT OF THE PROBLEM

The assignation of appropriate instructional materials to EMRs in special classes is of educational significance on two counts. Firstly, such materials constitute for the student, a success experience per se, and secondly, they represent a factor contributing to success within the instructional reading program.

The task of assigning instructional materials is one which confronts the special class teacher, and necessarily involves, on her part, an estimate of the instructional level of each student in her class. Inaccurate estimates, leading to the assignation of inappropriate materials, tend to create a learning situation which adversely affect the realization of goals and objectives where both reading



instruction and special education are concerned. Accurate estimates, on the part of special class teachers are therefore of paramount importance.

#### PURPOSE OF THE STUDY

The major purpose of this study was to examine the estimates made by special class teachers, with respect to the instructional reading levels of their students, in order to determine the accuracy of these estimates.

Additional purposes included:

1. The identification and description of the professional characteristics of the special class teachers involved in the study
2. The identification of professional characteristics, common to teachers making a greater number of accurate estimates, but which also distinguish them from their less accurate colleagues
3. A description of the procedures used by special class teachers when estimating the instructional reading levels of their students
4. The identification of various instructional practices and teacher opinions which might contribute to the interpretation of the major findings.

#### IMPORTANCE OF THE STUDY

Studies concerned with EMRs as they relate to the teaching of reading, have tended to focus on: (1) characteristics of EMRs





which influence the process of learning to read, (2) the methods and materials used in special classes, and (3) the reading achievement of EMRs in special classes as compared to the reading achievement of EMRs, and normal students, in the regular grades. Few studies have investigated the behaviour of special class teachers within the context of the instructional reading program. That such behaviour warrants investigation is evidenced by the statements of reading authorities (Artley, 1969; Harris, 1969), who have urged that the teacher become the focus of research in reading, and the comments of special educators regarding the paucity of research into the teaching behaviours of special class teachers in any area of the curriculum (Sparks and Blackman, 1965; Meisgeier, 1965). It is considered that an examination of special class teachers' estimates concerning the instructional reading levels of their students will be of some relevance in both fields.

The findings of this study will also reveal facets of the special education situation in Canada. Little is known regarding the teaching behaviour of the special class teachers in Canada or the status of their professional characteristics.

During the present decade concern has been expressed as to the efficacy of special class placement for EMRs. Generally studies have shown that "children enrolled in special classes achieve academically, significantly less than similar children who remain in the regular grades (Johnson, 1962, p. 66)." Dunn (1968) has suggested that the whole question of special class placement, particularly for





the mildly retarded, be reviewed. Before abandoning present organizational practices within special education it is pertinent to investigate aspects of teacher behaviour. Should the findings of this study indicate that special class teachers experience difficulties in estimating the instructional reading levels of their students, then one possible impediment to the academic progress of EMRs in special classes may have been identified.

The findings of this study may have implications also for teachers, administrators and university professors. Should teachers differ in their abilities to assign appropriate instructional materials to their students and should teachers who are proficient exhibit certain common professional characteristics which are not shared by less accurate colleagues, knowledge of these characteristics might be of assistance to:

1. Teachers in special classes who are considering further professional preparation in the field of reading
2. Administrators involved in the selection of special class teachers
3. Administrators planning reading in-service sessions for special class teachers
4. University professors engaged in the planning of courses and programs in the field of both reading and special education.

#### THE RESEARCH QUESTIONS

For the purpose of this investigation the following questions were formulated:



1. To what extent do special class teachers make accurate estimates concerning the instructional reading levels of the EMRS in their classes, and to what extent do they vary in assigning appropriate materials when word recognition and comprehension are considered separately?

2. What are the professional characteristics of teachers engaged in the education of the educable mentally retarded?

3. Do individual teachers differ in their abilities to assign appropriate materials to their students and if so do those teachers who demonstrate a higher degree of proficiency share common professional characteristics which distinguish them from their less proficient colleagues?

4. What procedures do special class teachers employ when estimating the instructional reading levels of their students?

#### DEFINITION OF TERMS

Several terms are used extensively in this study and are defined in operational terms.

Reading. In this study reading is defined in terms of the informal reading inventory in that it is a process involving the fluent recognition of words and the comprehension of the meaning conveyed by these words, at both the literal and interpretive level.

Informal Reading Inventory (IRI). This designates an informal test procedure for determining the appropriateness of instructional materials. It involves the oral reading of printed materials and the evaluation of the reading performance in terms of word recognition,



and both literal and interpretive comprehension. The specific IRI used in this study was Graded Selections for Informal Reading Diagnosis, Grades One through Three (Smith and others, 1959) and Grades Four through Six (Smith & Harris, 1963). Throughout this study these two inventories will be referred to as Smith IRI - Grades One through Three and Smith IRI - Grades Four through Six, respectively. A general term for these two inventories is the Smith IRI.

Instructional reading level. This term refers to the level at which instructional materials should be assigned if the learner is to profit from reading instruction. In this study a student was designated as reading at instructional level when scores approximating the following were made on the Smith IRI - Grades One through Three:

word recognition	95 + per cent accuracy
literal comprehension	85 + per cent accuracy
interpretive comprehension	70 + per cent accuracy

and scores approximating the following on the Smith IRI - Grades Four through Six:

word recognition	80 + per cent accuracy
literal comprehension	85 + per cent accuracy
interpretive comprehension	70 + per cent accuracy

Instructional reading materials. Instructional materials are the materials used by teachers for the purpose of teaching children to read. In this study teachers were asked to name the materials they were using for instructional purposes.





Appropriate instructional materials. These are instructional reading materials which approximate the instructional reading level of the students to whom they are assigned. Inappropriate instructional materials do not approximate the instructional level of the students to whom they are assigned.

Accurate estimate. This term denotes the assignation, by the teacher, of instructional materials which approximate the instructional reading level of a student on all three aspects, (word recognition, literal comprehension, and interpretive comprehension) or on any one of these aspects.

Accurate estimator. This term refers to a teacher who has made accurate estimates for four or five of the five students randomly selected from her class.

Professional characteristics. This term refers to the professional preparation and professional experiences of the teachers.

Professional preparation. This term refers to the educational background of the teachers as indicated by:

1. Years of university education
2. Degree status
3. Formal course work in reading
4. Formal course work in special education
5. Major field of study.

Professional experiences. This term refers to the classroom and field experiences of the teachers as indicated by:





1. Years of classroom experience
2. Years of regular grade experience
3. Level of regular grade experience
4. Years of special class experience
5. Type of special class experience
6. Other experiences in the educational situation.

Junior Opportunity Class. This term refers to a special class for those students who have failed to achieve in the regular grades, and whose chronological ages range from eight to twelve years.

Educable mentally retarded. This term refers to students attending a Junior Opportunity Class.

Special class teacher. This term refers to a teacher who is responsible for the education of EMRs attending Junior Opportunity Classes.

Readability. Readability is the relative difficulty of reading materials as measured by a readability formula. The Spache Readability Formula (1968), and A Formula for Predicting Readability (Dale and Chall, 1948) were used in this study.

#### ASSUMPTIONS

The following assumptions were made at the onset of this study:

1. It was assumed that in assigning instructional materials to their students the special class teachers involved in this study had adjusted the materials to accommodate the specific reading disabilities of each student. Consequently the reading performance of



the students would be an indication of the teacher's estimate of instructional level rather than a demonstration of particular disabilities.

2. It was assumed also that the reading performance of the students as demonstrated by one administration of the Smith IRI would reflect the performance of the student when reading the instructional materials assigned by the teachers, in which case the accuracy of the teachers' estimates could be determined from the Smith IRI performance.

3. A third assumption made was that the special class teachers in this study viewed the reading process as one involving the fluent recognition of words, and the conveyance of the literal and interpretive meanings of those words.

4. Lastly it was assumed that the EMRs, enrolled in the Junior Opportunity Classes, could engage in the various cognitive activities which would allow them to meet the instructional level criterion for both literal and interpretive comprehension.

#### LIMITATIONS OF THE STUDY

The investigation is ex post facto in nature and will not attempt to assign cause and effect.

#### OVERVIEW OF THE STUDY

This investigation is descriptive rather than experimental, and is concerned with teachers rather than students. It represents an attempt to describe that which existed at the time.



Chapter 2 will review the opinions of educators and the findings of research studies as these relate to the special class setting, instructional level reading, teacher estimates of instructional level and professional characteristics related to the effective teaching of reading.

Chapter 3 will describe the design and the implementation of the study.

Chapter 4 will present the findings of the study with respect to the professional characteristics of the special class teachers involved.

Chapter 5 will present the findings concerning the accuracy of teachers' estimates and the findings of The Informal Teacher Interview.

Chapter 6 will summarize the findings of the study and present the conclusions and implications.





## Chapter 2

### REVIEW OF THE RELATED LITERATURE

This review will present both the findings of researchers and the opinions and statements of professional educators. It will consist of five major sections.

The first section concerns the social learning theory of mental retardation and its implication for this study.

The second section discusses aspects of reading instruction as they apply to the special class situation.

In the third section professional opinions concerning the criteria for instructional level reading will be presented and their differences and similarities discussed in conjunction with the importance attached to the assignation of appropriate instructional materials. A discussion of the informal reading inventory will also be included.

The fourth section will review research findings related to teachers' estimates of instructional level, while a fifth section will review research studies which have attempted to establish the relationship of teachers' professional characteristics to the effective teaching of reading.

### THEORETICAL FRAMEWORK

Authorities in the field of special education generally emphasize the role of the special class teacher as a diagnostician





who evaluates the abilities of her students and is consequently concerned with "both the adaptation of instruction and materials to the achievement level of each child (Kirk, 1962, p.121)." The importance of adjusting the level of instructional materials has ramifications for the performance of EMRs when viewed in the context of the social learning theory of mental retardation advanced by Cromwell (1963). This theory is outlined and the implications for the instructional reading situation presented.

The social learning theory of Cromwell (1963) is concerned with the personality development of the mentally retarded and is an extension of the theory proposed by Rotter (1954). Basically Rotter maintained that personality develops as a consequence of the individual's interaction with the environment. This interaction is composed of behavioural sequences which are always directional, and involve either moving toward or moving away from, an identifiable goal. The direction in which the individual is moving is "determined not only by the nature or importance of goals or reinforcements but also by the person's anticipation or expectancy that these goals will occur (Rotter, 1954, p. 102)."

A concept of generalized expectancy was formulated by Rotter and Cromwell states that this component of personality is "developed from reinforcements in other situations" which are then "generalized to the present situation (Cromwell, 1963, p. 45)."

Working within this framework Cromwell has attempted to develop



a theory which might account in part for the learning difficulties of the mentally retarded. The capacities of the mentally retarded are limited and consequently a significant aspect in the experiences of a retarded child is that "he would likely meet with more failure than the normal child in his day-by-day goal-directed behavior (1961, p.46)."

A history of failure experiences has consequences for the learning situation. EMRs, when compared to normal children, begin a learning task with a lower generalized expectancy for success.

Using terms applied by Moss (1958) Cromwell postulates that individuals can be identified as success-approachers or failure-avoiders. EMRs are primarily failure-avoiders and are "strongly motivated to avoid failure even at the cost of giving up chances of success (Wachs and Cromwell, 1966, p. 803)." This characteristic, developed as a result of continued failure, accompanied often by negative reinforcement, eventually results in withdrawal from the failing situation. Cromwell has observed that the eventual outcome is depressed functioning. He states, "personality or behavior patterns develop in many retarded children which tend to lower their social and intellectual efficiency a measure below what we would already expect on the basis of their constitutional impairments (1961, p. 47)."

The implications of this theory, when applied directly to the question of instructional reading materials, are immediately obvious. The teacher must assign appropriate materials in which the EMR can succeed, thus fostering the development of a generalized expectancy for success and success approaching tendencies. When instructional



materials are too difficult avoidance tendencies are likely to develop and functioning will be depressed. In short the reading performance of a student may be below what might be expected on the basis of his "constitutional impairment."

Kirk (1940) has directed specific attention to the problem special class teachers must overcome when students are placed in a special class after failure experiences in the regular grades. He notes:

...the teacher should first re-establish the child's security which has been shattered during his years of failure. She will have to do this by presenting the child with materials with which he can succeed, so that confidence may be re-established (pp. 37-38).

Although Kirk's emphasis here is for the provision of a successful learning environment for EMRs new to the special class situation, it cannot be confined to such students. Appropriate materials are essential for all EMRs whether or not their placement is recent. This study, therefore, attempts to determine the accuracy of special class teachers' estimates concerning the instruction reading levels of EMRs in special classes, regardless of the length of time spent in the special class situation.

#### READING IN THE SPECIAL CLASS

Instructional level reading is demonstrated by a degree of accuracy in both the word recognition and comprehension aspects of reading. Instructional level reading therefore implies that reading involves "not only the fluent, accurate recognition of words but also the fusion of specific meanings represented by them into a chain of





related ideas (Austin, 1963, p. 35)."

This definition of reading, gross rather than specific, is one accepted by many educators in the field of both reading and special education. The reference made to "the fusion of specific meanings into a chain of related ideas" implies comprehension beyond the literal level and this point was considered in the selection of an informal reading inventory for use in this study. The Smith IRI includes a selection of questions which assess comprehension at the literal and interpretive level.

Jordan (1967) in referring to reading readiness activities for young EMRs in special classes has observed that "reading is, first of all a language activity. Comprehension, not just the recognition of written words, is the goal and reason for teaching it (p. 29)." She further maintains that "critical, independent thinking is necessary to good reading (p. 30)," and recommends that the stimulation and development of higher thought processes such as, the recognition of absurdities, inductive and deductive reasoning, and categorization be an essential part of the readiness activities in order that reading for EMRs does not represent an exercise in word recognition where "comprehension is incidental (p. 30)."

Robert Smith (1968) agrees with Jordan stating that, for EMRs a "central aim of the reading program is for each child to eventually move from overattending to the process of attacking words to focusing on their meaning and content (p. 160)." He further maintains that "reading is essentially useless exercise if the reader does not





understand the meaning of the words he calls (p. 159)." He recommends the use of an IRI by special class teachers, referring them to two sources (Betts, 1963; Johnson & Kress, 1965) which explain the construction of an IRI. Both sources advocate that questions following an IRI go beyond the literal level. Indeed Robert Smith himself contends that special class teachers should develop comprehension skills which eventually allow the EMR to "grasp the meaning and implications of entire selections (p. 160)."

The goals set by special educators for EMRs imply purposes for reading instruction which are similar to those advanced for normal students. This goal supports the concept of instructional level reading as an essential component of effective reading instruction and further emphasizes the necessity for teachers to assign appropriate materials for EMRs. Whether or not, special class teachers assign such materials is the central concern of this study.

Within this chapter no specific attempt has been made to describe the various learning deficits or problems exhibited by EMRs though it must be acknowledged that they do, indeed, exist. Jordan (1963) has noted that the one characteristic common to all EMRs that of slow mental development. Within the reading situation the implications of this characteristic are perhaps obvious. The rate of learning is slow and teachers must consequently assign materials which accommodate this slower rate. She must be influenced by the mental age of a student rather than his chronological age.

Other characteristics which interfere with the learning



performance of EMRs are cited by Jordan (1963), though not all EMRs exhibit all these characteristics. Among those listed are:

1. Poor retention of information
2. Language deficits
3. Reduced ability to operate at the abstract level
4. A proneness to frustration
5. A short attention span
6. Perseverative tendencies,

and a reduced ability to transfer and generalize learnings.

These learning characteristics have implications for the special class teacher when she assigns instructional reading materials. The materials she assigns must compensate for, and strengthen the weaknesses exhibited by each student.

The proneness to frustration which EMRs exhibit implies that instructional materials must approximate the instructional level of the student to whom they are assigned. Language deficiencies require that instructional materials be assigned which both capitalize on the language of the child, and yet provide for development and expansion. Where poor retention is a factor, there exists a need for instructional materials which present opportunities for review and over learning. A variety of materials at one difficulty level can present such an opportunity. In short, the various learning difficulties exhibited by an EMR must be considered by the teacher when assigning instructional materials. Neither the development of strengths nor the remediation of weaknesses are likely to occur in circumstances



where instructional materials present numerous word recognition difficulties and their content are not understood by the reader.

The task of assigning appropriate instructional materials is a demanding and exacting one. It is, however, one which must be met if reading instruction is to result in the development of reading skills and abilities and if special class placement is to result in success experiences within the context of the instructional reading program.

The first two sections of this chapter have presented a theoretical basis for the present study, outlined goals for reading instruction in the special class situation, and stressed the role of the special class teacher in assigning appropriate instructional materials to EMRs. The next section will discuss the concept of instructional level, and the means for determining this level.

#### INSTRUCTIONAL READING LEVEL

The concept of instructional level was first proposed by Betts (1946). He describes this level as "the highest possible reading level at which systematic instruction can be initiated (p. 439)." Further definitions of instructional level represent a rephrasing or restating of Betts' view. Zintz (1970, p. 53) identifies it as the teaching level, while Bond & Tinker (1967) note that it is the "level at which a pupil is able to make successful progress in reading under teacher guidance (p. 199)." In terms of a student's reading performance, Harris (1962, p. 122) observes that instructional level is





indicated by a minimum of word recognition errors, fairly fluent reading and comprehension which is mainly correct.

Such descriptive definitions of instructional level are open to personal interpretations by individuals but most descriptions are accompanied by specific criteria which denote per cent accuracy scores for both word recognition and comprehension on the part of a reader.

Betts (1946), himself, stipulated that instructional level was the level at which a child, reading from printed materials, made "a minimum comprehension score of at least seventy-five per cent based on both factual and inferential questions (p. 449)," and accurately pronounced ninety-five per cent of the running words. Various authorities tend to agree with the criteria proposed by Betts. The upper and lower limits of instructional level for both word recognition and comprehension are listed below and the authority citing the criteria noted. The numerical values indicate per cent accuracy:

<u>Authority</u>	<u>Word recognition</u>	<u>Comprehension</u>
Betts (1946)	95-98	75-89
Smith, N. B. (1959) Grades One to Three	80-85	85-90 (literal) 70-75 (interpretation)
Smith, N. B. (1963) Grades Four to Six	95 +	85-90 (literal) 70-75 (interpretation)
Johnson & Kress (1965)	95-98	75-90
Botel (1968)	95-98	75-94
Bush & Huebner (1970)	95-98	75-90





The criteria reproduced here indicate a consistency among the various authors with the exception of Smith, who for students in grades one to three, allows a greater number of word recognition errors, but who also demands a higher literal comprehension score for all grades at the elementary level. However the criteria advocated by Smith are those cited for use with a specific informal reading inventory and the inclusion in her criteria of a separate accuracy score of 70 per cent for interpretation may, in part, account for the higher literal comprehension criterion of 85 per cent.

Harris has stated that "the most important single question to answer about a child's reading is: how difficult a book can this child read (1961, p. 153)?" Within the instructional reading program the instructional level provides the teacher with reasonably concrete guidelines for answering this question. In providing a child with instructional materials at his instructional level the teacher in fact provides materials which

...are difficult enough to be challenging but sufficiently easy that the student can do independent seat work with only the usual readiness help from the teacher when assignments are made (Zintz, 1970, p. 54).

This observation by Zintz draws attention to the benefits which accrue to both student and teacher when appropriate materials are assigned. The student benefits by virtue of the fact that instructional level materials accompanied by efficient teaching set the stage for success in learning to read, and the teacher benefits because appropriate materials imply more time available for the introduction of new skills rather than the persistent reteaching of those previously introduced.



The argument for the assignation of appropriate instructional materials has been advanced. The consequences of assigning inappropriate materials will now be discussed.

### Inappropriate Instructional Materials

The consequences, to the child, when inappropriate instructional materials are assigned by the teacher, have been stated and discussed by many reading authorities. Generally, concern is expressed regarding materials which are too difficult for the reader, although materials which are too easy have received some attention. Materials which are too easy are considered not to provide a situation in which new reading skills and abilities can be acquired. They are materials which approximate a child's independent reading level, the level at which he can read and enjoy materials without guidance from the teacher. In terms of specific criteria this level is characterized by a word recognition score of 98 - 99 per cent accuracy and a comprehension score of approximately 90 per cent. Betts (1946) has observed that maximum development cannot be assured if instructional materials are at a level where the language and content of the material does not challenge the reader. Botel (1968) has made a similar observation and noted that instructional materials assigned at independent level do not provide a sufficient challenge to the reader and may result in disinterest.

Materials which are too difficult present the learner with a different situation. Certainly there is little opportunity to acquire new skills since skills previously taught, but unlearned, continue to



present obstacles in new material. In addition, however, the student is faced with a learning situation where he cannot succeed and is consequently frustrating to him.

Materials in which students make excessive word recognition errors and demonstrate poor comprehension are designated as approximating frustration level. In such materials the learner scores less than 90 per cent in word recognition and less than 50 per cent in comprehension. These criteria for frustration level are cited by Betts (1946) and Johnson and Kress (1965). Botel (1968, p. 171), however, indicates that accuracy scores falling below those designating instructional level represent frustration level and it is perhaps obvious that students who cannot reach instructional level are overplaced in their instructional materials, though not to the same degree as those scoring below 90 per cent for word recognition and 50 per cent for comprehension.

The criteria for word recognition advocated for use with the Smith IRI - Grades One through Three is 80 per cent accuracy.

Frustration level for word recognition would be indicated therefore by a word recognition score of less than 80 per cent. Frustration level for literal and interpretive comprehension would be denoted by a score of less than 50 per cent. A score falling between 50 per cent and the respective criteria for literal and interpretive comprehension would indicate the assignation of materials that were too difficult for the reader though not at frustration level. These criteria for frustration level were applied to the scores made by students on the Smith IRI as administered in this study.





Generally, reading authorities agree that poor reading is encouraged and reading progress impeded when teachers assign, to students, materials which are too difficult for them.

Sheldon (1960) has remarked that "many reading specialists feel that if each child were taught on his instructional level, with this instructional level frequently reassessed, reading failures would be reduced substantially and children would enjoy reading (p. 4)." Kress (1960) has noted that the principal factor, inhibiting reading progress for the child with a corrective reading problem, is the inability of the teacher to provide instructional materials which are "within the child's present range of word-recognition and comprehension skills (p. 540)."

Botel (1968) has summarized some of the effects of frustration level placement in observing that the resultant lack of success "leads to discouragement, loss of dignity or ego support, withdrawal and often to hostility (p. 171)." The onus for avoiding such psychological manifestations and for providing instructional materials in which a child can succeed must be placed with the school system and ultimately with the classroom teacher.

The importance of determining the instructional level of students has been stressed by many authorities. Generally these authorities recommend the use of an informal reading inventory (IRI) as an instrument for determining instructional level. A number of major aspects relating to the IRI are now discussed.





### The Informal Reading Inventory

The IRI is basically a non-standardized test of reading which can, for the classroom teacher, serve two purposes. Firstly, it can be used to determine the independent, instructional and frustration levels of students in order that appropriate materials may be assigned for independent and instructional reading and materials at frustration level avoided. Secondly, it can be used to evaluate diagnostically the strengths and weaknesses of a student's reading performance in the areas of both word recognition and comprehension. This discussion of the IRI is confined mainly to its use as an instrument for determining reading levels, specifically, instructional level, and proceeds in terms of the composition, administration and scoring procedures.

Composition of the IRI. The IRI consists of a selection of written passages or stories which are graded according to level of difficulty. These selections should, according to several authorities (Harris, 1962; Johnson and Kress, 1965; Heilman, 1967), closely parallel in content and level of difficulty the materials to be used in the classroom. Thus, when the purpose of the IRI is to determine instructional level so that students may be assigned appropriate instructional materials in a basal reading series it is recommended that the IRI be composed of selections from another basal reading series. Zintz (1970, p. 55) recommends selecting passages from the actual series to be used in the instructional reading program and points out that if the reading texts themselves are used, this provides the student with, not only the appropriate level of difficulty,



but the format, approximate print size and accompanying picture clues.

Although these minor disagreements exist as to the specific materials contained in the IRI there is obvious consensus that, if the IRI is to serve its purpose then the levels of difficulty inherent in both the IRI, and the instructional materials to be used, must approximate each other. In this study, a readability formula was applied to the Smith IRI selections and to the instructional materials assigned to the student in order to equate levels of difficulty.

Several authorities (Betts, 1946; Johnson & Kress, 1965; Spache & Spache, 1969) recommend two sets of material at corresponding levels of difficulty be available. They recommend that one set be read orally by the student, followed by questions to check comprehension. The other selection is for the purpose of checking comprehension after silent reading. Harris (1961, p. 157) advocates that students reading above third grade level be given a test of silent reading following the oral reading of a selection. He does not advocate both procedures for pupils reading at third grade level or below. The Smith IRI used in this study allows for the oral reading of a selection but does not provide alternative selections for silent reading. The author does note that a teacher wishing to check the rate of silent reading may use a selection to accomplish this. This observation was made only in the instructions accompanying the Smith IRI - Grades Four through Six. The investigator was aware that the majority of the EMRs in this study were using instructional materials at, or below, the grade three level, therefore, the decision was made to include only oral reading in the administration of the Smith IRI.



Administration of the IRI. The administration of an IRI consists of the reading of one or more selections by a student, followed by a comprehension check and the scoring of word recognition errors. For maximum benefit to both teacher and student it is recommended that the IRI be administered on an individual basis. This recommendation was observed, by the researcher, when administering the Smith IRI to the EMRs involved in this study.

As a student reads orally word recognition errors are recorded by the examiner and words which the student cannot pronounce are pronounced for him. Spache et.al. (1969, p. 341) advocates that the oral reading of the student be recorded on tape thus permitting more careful scrutiny of word recognition errors. The oral reading performance and the responses of the EMRs to the comprehension questions were recorded on tape by this researcher.

Generally there is agreement among authorities that a purpose for reading the IRI be established, for the student, by the examiner. Harris (1961) suggests a brief discussion of the first illustration. Johnson and Kress (1965) recommend discussion but note that the examiner should not reveal so much in the way of the vocabulary, or the ideas contained in the selection, that the actual performance of the student is questionable. The Smith IRI does not stipulate a purpose for reading be established, however, when it was administered to the students involved in the present study, a brief discussion of the first illustration was included. This procedure also permitted rapport to be established between the researcher and the student.





There is consensus among reading authorities that the questions accompanying an IRI selection should require answers which go beyond the stating of facts. Johnson and Kress stipulate that questions "should cover grasp of the vocabulary, acquisition of factual information (that definitely stated by the author), and drawing and supporting of inferences (p. 33)." Betts (1948) notes the necessity for questions at the literal level but adds that "to appraise quality and depth of comprehension, however, it is desirable to interrogate with inferential-type questions or to give the pupil an opportunity to express his between-the-lines reading (p. 461)." The views expressed by Johnson and Kress and Betts are supported by Austin and Huebner (1962, p. 341), who state that both factual and inferential questions should be asked. The opinions expressed here were considered when the Smith IRI was selected for use in this study. Both literal and interpretive comprehension questions follow each selection.

Scoring procedures. There exists a measure of disagreement among authorities as to which word recognition errors should be included in the error count for purposes of assessing the student's performance. This disagreement is centered around those errors identified as self-corrections and repetitions. Zintz (1970) and Harris (1962) state that self-corrections should not be counted. Yet, Spache and Spache (1969) recommend that they be counted as errors when a repetition is involved. According to them, repetitions do not constitute an error unless two or more words are involved. McCracken (1967, p. 85) cites repetitions as an error when either a





word or a phrase are involved.

Among the authorities cited here, however, there was agreement that mispronunciations, additions, omissions, substitutions and words pronounced by the examiner should be scored as errors. These five error categories were applied to the reading performance of the EMRs involved in this study.

One further recommendation, noted by Harris (1961), was observed in scoring the word recognition performance of the EMRs. Proper nouns were not scored as errors when they were mispronounced by the reader, or pronounced for the reader, by the examiner. It was recognized that students reading from pre-primer selections might be unduly penalized if this procedure was not adopted.

Scoring responses to the comprehension questions involves a greater degree of subjectivity on the part of the examiner. The teacher devising her own questions must decide which answers she will accept, and which she will reject and indeed whether she will assign credit for responses which only partly answer the questions. Published IRIs such as the Smith IRI provide answers to the questions accompanying the selections. These can provide a useful guide but a degree of subjectivity must always exist when questions call for interpretation of the material read.

The scoring of the IRI is complete when both the word recognition and comprehension scores are converted to a per cent accuracy score. Instructional level reading can then be designated but only when the full criteria for instructional level are met. To be



designated as reading at instructional level, the students involved in this study were required to meet the full criteria.

This section has defined the concept of instructional level and described the IRI as a means for determining this level. In addition the importance of assigning appropriate materials has been stressed. The following section will report the findings of researchers as these findings relate to the ability of teachers to assign appropriate instructional materials.

#### TEACHERS' ESTIMATES OF INSTRUCTIONAL LEVEL

Despite the emphasis placed on the need for children to be assigned appropriate instructional materials the research presented in this section would indicate that this is a task which teachers, at least those in the regular grades, either find extremely difficult or simply do not attempt to perform. Austin (1963) in an extensive study of reading practices in American elementary schools describes what she found to be fairly typical of grouping procedures, in the schools, as exemplified by one school in which twelve hundred children were enrolled, and where seventy-two reading groups were operating.

As the range of ability increased through the grades, the number of reading groups decreased, to the extent that 22 per cent of the seventy-two groups were found in grade 1, but only 14 per cent in grade 6 although enrollment remained constant (p. 77)

The assumption here must be that many students in this school, and in the schools of which it was typical, were learning to read from inappropriate materials.



Gellerman, as early as 1948, revealed findings which pointed to teachers' difficulties or inabilities to adjust instructional materials to the instructional levels of their students. He analysed the case studies of forty-eight children with reading difficulties. He noted that 31 per cent of the children had IQs below ninety but concluded that low intelligence alone accounted for only a few cases of reading difficulty. He stated:

The overwhelming majority of reading difficulties among the intellectually sub-normal children were due primarily to instructional programs which were not adjusted to their needs (p. 526)

He further remarked that although low intelligence might cause a child to fall behind in reading, other factors kept him behind. These factors he called complicating factors and added that the chief complicating factors in the case studies, "involved improper instructional level and inadequate remedial techniques (p. 526)." Of these two factors he considered the first to be so wide spread that it was deserving of special emphasis.

Long (1959) in a study involving 153 retarded readers from grades two, four and six, reported that "teachers at all grade levels were instructing the retarded readers in materials too difficult for them (p. 65)." She noted that some of the teachers involved in the study were able to correctly identify the particular reading difficulties of their students. The majority of these same teachers, however, still instructed the retarded readers in materials which were too difficult. One grade teacher was reported as being aware that all sixth grade work was beyond a certain child's grasp. She





nevertheless continued to instruct the child at the sixth grade level.

Anastasiow (1964) noted a similar effect operating in a study involving teachers at fourth, fifth and sixth grades. Irrespective of the achievement or ability level of the class he found that "teachers perceived the bulk of the class as being at grade level (p. 392)," and all teachers assigned the majority of their students a reader of the same level as the grade. The teachers did attempt to take into account, at least to some degree, the individual differences existing among their pupils, by grouping for reading instruction, but "these considerations seem to have been anchored in the materials provided in the form of textbooks or other graded materials which are based on the norms obtained from national samples (p. 393)."

Millsap (1962) in her study was directly interested in whether or not teachers assigned students instructional material (in this case basal readers) which were at frustration level. The teachers involved numbered 123 and taught grade one through six. The teachers were asked to appraise the suitability of material after seeing transcripts of material read by students with all word recognition errors, and answers to comprehension questions, recorded. In addition they were given unmarked transcripts and asked to listen to the recorded voices of students and decide on the appropriateness of the material for the reader.

Millsap concluded that the teachers were aware of frustration level reading in 70 per cent of the cases but were unaware in the remaining 30 per cent. The teachers indicated to Millsap that they





assigned instructional materials on the basis of a student's reading performance in the materials, but Millsap concluded that they did not "possess clear definite, and objective standards (p. 210)," to apply to the reading performance.

Two studies reported by Zintz (1970) present findings which are similar to those of the studies already documented. Gipe (1967) administered an IRI to a class of thirty-one fifth grade children and concluded that only seven students were reading appropriate materials. While fourteen students were reading materials at frustration level ten were reading books which were too easy. In all, 77 per cent of the students were, according to their performance on the IRI, learning to read from inappropriate instructional materials.

Brown (1968) administered an IRI to sixty children and reported that scores indicated 68 per cent of the students to be inaccurately placed in materials. As with the Gipe study not all the students inaccurately placed were reading materials which were too difficult.

#### The Special Class

Only one study could be located which dealt specifically with the special class teachers' estimates of students' instructional level. Brown (1966) administered an IRI to thirty EMRs from fifteen special classes at the intermediate level. For the IRI selections she used passages from the instructional reading materials EMRs were using in their classrooms. She considered 50 per cent of the students to be accurately placed, while 23 per cent were reading materials



which were too easy, and 27 per cent were reading materials which were too difficult. Brown determined that twelve of the fifteen teachers involved used an informal reading inventory to place children in instructional materials and argued that instructional level, for a child in the corrective or remedial situation, indicates the point at which a halt should be called in the program in order that "skills which are missing can be brought to a point of competence (p. 60)." She argued that instructional level for EMRs does not represent the point at which instruction should be given but where remediation should begin. This does not detract from her findings particularly in the respect that 27 per cent of the students involved were reading materials which indicate a failure on the part, of at least a proportion of the teachers involved, to provide success experiences for children who have been placed in special classes for that very purpose.

### Summary

The research presented here would seem to support the conclusion that regular grade teachers do not always accurately estimate the instructional levels of their students. It has been suggested that teachers tend to assign material at grade level regardless of the ability range within the class (Anastasiow, 1964). It should be noted that this factor cannot apply to special class teachers who do not teach at a specific grade level. It is also evident that teachers can be aware of assigning inappropriate materials, and of the reading difficulties of some of their students, and yet not be persuaded by this awareness to modify instruction in the



form of less frustrating materials. There is also some evidence, though slight, to indicate that special class teachers are not necessarily more accurate than their regular class colleagues (Brown, 1966). The present study, like Brown's, was concerned with the accuracy of special class teachers' estimates of instructional level, but goes one step further in attempting to identify professional characteristics which might be related to the ability of teachers to make accurate estimates.

The ability of teachers to assign appropriate instructional reading materials can be classified as an effective teacher behaviour. The following section will review research studies which have attempted to identify professional characteristics related to the effective teaching of reading.

#### PROFESSIONAL CHARACTERISTICS AND THE EFFECTIVE TEACHING OF READING

The assumption is made that greater teacher preparation is related to more effective teaching in the classroom situation. Evidence for this assumption is furnished by the fact that teachers are urged constantly either to extend their initial period of preparation, or if already in the field, to return to university and increase their qualifications. This is true of teacher preparation in the general sense, and it is also true with respect to specific areas such as reading and special education. The opinion is also expressed, at least among teachers, that the experienced teacher will be more effective than the inexperienced one.







The studies which are reviewed in this section are those which have examined certain objective teacher characteristics and their relationship to the effective teaching of reading.

Hall (1962) set out to determine whether the completion of professional preparation would result in producing more effective teachers. Effectiveness was defined as pupil gains on a standardized achievement test. The thirty-eight teachers involved in the study were all first year teachers at grade levels three, four, or five. However seventeen of the teachers were fully certificated and had completed the prescribed education program and the required teaching practices. The remaining twenty-one were provisionally certificated since they lacked all, or a part, of the program and had not at any time engaged in practice teaching. Generally, Hall found that the students taught by the fully certificated teachers made greater gains on the achievement test. The test used by Hall specifically measured pupil gains with respect to paragraph meaning, word meaning and spelling. Although gains were made in the area of arithmetic computation and problem solving these gains were not significant. He concluded that the number of hours a teacher had taken in professional education was significantly related to pupil achievement in the language areas as defined by the three sections of the test mentioned above. Greater teacher preparation in his view was related to greater effectiveness in the classroom. Therefore, the special class teachers involved in the present study were asked to specify the years of university education they had received.



Tetley (1964) also examined the relationship of certain teacher characteristics to pupil achievement in reading. She confined her study to teachers of grades four, five and six. Three of the five characteristics investigated were (1) number of years of professional education, (2) specialization in the field of reading, and (3) number of years of teaching experience.

Tetley concluded that years of professional education and gains in pupil achievement were not significantly related but she did note a trend for teachers with greater preparation to be slightly more effective. She further reported the number of years of teaching experience to be more effective at two grade levels but not at a third. Generally there was a tendency toward reduced effectiveness where the years of experience exceeded ten.

With respect to specialization in the field of reading Tetley concluded that such specialization was definitely effective in producing improved pupil achievement in reading, and stated this to be the most significant finding of her study. She did however imply that a combination of teacher characteristics might be more likely to account for teacher effectiveness. This statement was based on the observation that often the effective teachers had received their training more recently as well as having had extra training in reading. Tetley's findings prompted the inclusion, in this study, of preparation in the field of reading as a professional characteristic and the special class teachers were asked to supply pertinent details.

Another study using pupil achievement in reading as the



criteria for teacher effectiveness in reading was that of Attea (1966). Pupil achievement was measured in the fall of the school year, and again in the following May. Among other teacher characteristics, Attea looked at, (1) formal course work in reading, (2) teaching experience, (3) teaching experience at the grade I level, and (4) graduate preparation per se, as well as specific grade preparation in the area of elementary education.

The teachers in the study numbered 161 and all taught at the grade one level. Attea concluded that both total years of teaching experience and teaching experience at the grade one level were positively related to pupil achievement in reading. Further, he noted that although graduate study per se was not related to pupil achievement in reading, graduate study in the field of elementary education was. Thus the specific kind of graduate study appeared, in this instance, to be more important than graduate study in general. Teachers in this study were, therefore, asked to indicate the specific nature of their graduate study.

Attea's findings with regard to greater training in formal course work related specifically to reading are in contrast to those of Tetley. He concluded that such course work was not related to pupil achievement in reading and consequently not related to effective teaching.

Millsap (1962) directly examined the relationship of teachers' awareness of frustration level reading and certain teacher characteristics. She found that years of teaching experience were not related





to effectiveness with respect to this particular teacher behaviour. However she did find positive relationships between teachers' awareness of frustration level and certain formal reading preparation. The number of basic reading courses taken by teachers appeared to be significant in detecting frustration level reading. The relationship was described as very significant where diagnostic or remedial reading courses were involved, and extremely significant where a corrective reading laboratory course was involved. Therefore, in this study, the teachers were asked to specify the nature of the reading course they had acquired so that Millsap's conclusions could be explored further.

Millsap found no relationship to exist where a basic language methods course or a course in the psychology of reading was concerned.

Burnett (1961) was engaged in a study, the purpose of which was to construct and explore the validity of a test, which would measure the proficiency of elementary school teachers in solving problems related to reading. He defined the teaching of reading as essentially problem solving behaviour and participants in the study were asked to solve problems which consisted of five stages. One stage involved the teachers making estimates regarding the suitability of instructional materials for a particular student. Three groups of educators were involved in the study and included, (1) students preparing to be elementary teachers, (2) experienced teachers, and (3) reading specialists. Generally the reading specialists were more proficient than the teachers in solving the problems presented, while the teachers were more proficient than the students. Burnett also





found that teaching experience beyond three years did not result in increased problem solving proficiency. He concluded further that the possession of a graduate degree was not related to increased proficiency. It might also be hypothesized that the reading specialists in the study would have taken extra course work in the field of reading and that this might be related to their greater proficiency.

A study somewhat similar to that of Burnett's was that of Wade (1960). Wade was interested also in the construction and validation of a test of ten teacher skills used in reading instruction. The test measured ten skills regarded as necessary for the individualization of reading instruction in grades two through six. Of the ten skills investigated five were concerned with the appropriateness of instructional materials. Wade predicted that the students, whose teachers made high scores on his test, would make greater gains in reading. Several groups of teachers were involved in the study as well as undergraduate students with no teaching experience and a group of students identified as practice teachers because they had completed sixteen weeks of teaching practice.

Wade investigated the relationship between teaching experience and problem solving ability. He found that generally the teachers out-scored the practice teachers thus indicating that experience was related to problem solving ability. He noted, however, that this finding was not upheld where the selection of appropriate instructional materials was concerned. He suggested that as experience increased, teachers as a group "became less skillful in selecting,



and helping children to select, books of suitable difficulty (p.61)."

Wade's findings reinforced the decision in this study to consider different aspects of the teachers' professional experiences, especially the number of years they had taught, as teacher characteristics which might be related to their estimates of instructional reading level.

### Summary

The studies reviewed in this section present somewhat conflicting findings with respect to the relationship among various teacher characteristics and effective teaching behaviour with respect to reading. These findings are summarized below.

Teaching experience. Generally, the number of years of teaching experience does not appear to promote more effective teaching of reading. Tetley (1964) reported that teaching experience beyond ten years tended to result in lower pupil achievement. Burnett (1961) indicated that teaching experience beyond three years did not result in the increased proficiency of teachers to solve reading problems. Wade (1960) found that experience contributed to some teaching skills but not to those concerned with the estimating of appropriate reading materials for students. Millsap (1962) found no relationship between the ability to detect frustration level reading and number of years of teaching experience. One study that of Attea (1960) reports a positive relationship between pupil achievement in reading in grade one, and (1) the total number of years for which teachers had taught, and (2) the number of years for which they had taught at the grade



one level.

Years of teacher preparation. There exists some evidence which relates the effective teaching of reading to greater teacher preparation. Tetley found a tendency for teachers with more preparation to produce greater pupil gains in reading achievement while Hall (1962) found that fully certificated teachers induced greater pupil gains than those who were provisionally certificated.

With respect to graduate training Burnett found the possession of a graduate degree did not appear to affect the problem solving proficiency of teachers. These findings agree with those of Attea who concluded that the completion of graduate study per se was of little significance. In contrast, however, Attea did find that the completion of graduate studies in the area of elementary education was significant.

Formal course work in reading. Three of the studies were concerned with the relationship of the effective teaching of reading and formal course work in reading. Attea found such course work was not related to teacher effectiveness. In contrast both Tetley and Millsap agreed that extra training in reading was positively related to effective teaching. Tetley found this to be effective for pupil achievement per se and Millsap in the detection, by teachers, of frustration level reading.

While some of these findings were contradictory, the characteristics identified by these investigators lent support, and gave direction, to the professional characteristics identified in this







study. Of even greater importance was the direction these studies gave to the need for specificity in exploring teacher characteristics as these may be related to aspects of teaching behaviour.



## Chapter 3

### THE PLAN OF THE STUDY

This chapter will include a description of the teacher population and of the students involved in the study. The instruments used for data collection are identified and discussed. The readability formulas used are described and the purpose for which they were used is stated. Details concerning the administration and scoring of the Smith IRI are presented. Procedures involved in collecting and analysing the data are identified and conclude the chapter.

### THE TEACHER POPULATION

The population consisted of all those teachers employed by a large urban school board, the Edmonton Public School Board, to teach in special classes designated as Junior Opportunity Classes. A total of fifteen teachers comprised the population and were the subjects of this study. All but one of the teachers were female.

The teachers were located in fifteen elementary schools throughout Edmonton and each teacher's classroom represented a self-contained unit. No teacher had more than fifteen EMRs on roll and none had fewer than twelve. All fifteen teachers taught reading to all, or a proportion of their students. Table 1 reports the number of students enrolled in each teacher's class and the number of students to whom she taught reading. In Table 1 each teacher is identified by a letter of the alphabet and is identified by that same letter



Table 1

Number of Students Enrolled in Each  
Class and Number Receiving Reading  
Instruction from the Teacher

Teacher	No. of students in class	No. of students receiving reading instruction
A	14	14
B	14	14
C	14	14
D	14	14
E	13	13
F	13	13
G	13	13
H	13	13
I	15	15
J	15	9
K	15	15
L	12	12
M	15	15
N	14	14
O	15	15





throughout the study.

Table 1 indicates that one teacher, Teacher J, taught reading to nine students. This teacher also taught reading to a further six students but these were EMRs from a Primary Opportunity Class situated in the same school. These six students were not included in the study, neither were the six students who transferred from Teacher J's classroom for the purpose of receiving reading instruction from the Primary Opportunity Class teacher.

One purpose of this study was to identify and describe the professional characteristics of the fifteen teachers. A detailed description of the teachers is therefore presented in Chapter 4.

#### THE STUDENTS IN THE STUDY

The students involved in this study were not themselves the subjects of the study. Their performances on the Smith IRI, however, were used as the criteria for determining the accuracy of the teachers' estimates concerning their instructional levels. The chronological age, the intelligence quotient and the sex of each of the seventy-five students involved in the study are reported later in this section. These data will familiarize the reader with the students to whom the teachers must assign instructional materials. It is anticipated that this information will assist the reader in making a more meaningful interpretation of the findings.

The total number of students enrolled in the fifteen Junior Opportunity Classes was 209. The chronological ages of these EMRs



ranged from eight years to twelve years eleven months. Ninety-seven students were girls and one hundred and twelve were boys.

Using a table of random numbers, seven students were selected from each of the fifteen teachers' classrooms. It was intended that the first five students selected from each class would be involved in the study making a total of seventy-five students. The remaining two students in each class were involved only when one of the original five was absent from school on the day on which the Smith IRI was administered, or when any student exhibited a characteristic which would make the administration of the Smith IRI impractical or the scores obtained invalid.

A total of eight students were deleted from the original sample of seventy-five for the reasons stated. A further two students were deleted due to difficulties with the recording equipment. In all, ten students were deleted from the original sample and replaced by ten other students. Table 2 reports the number of students deleted from each teacher's class and gives reasons for the deletion. No changes in the original sample of five students were made in six cases. In only one sample were two students deleted. In this instance the recording equipment failed to record adequately. It was not possible to administer the Smith IRI a second time to these two students since each had read the prepared material, and a second reading would have placed other teachers involved in the study at a disadvantage. A second visit was made to this school to administer the Smith IRI.



Table 2

Number of Students Deleted  
from Each Teacher's Class  
and Reason for Deletion

Teacher	No. of students deleted	Reasons for deletion
A	1	absence
B	1	speech defect
C	0	
D	1	unresponsive in oral situation
E	1	absence
F	0	
G	0	
H	1	hyperactivity and lack of concentration
I	0	
J	0	
K	1	speech defect
L	1	absence
M	1	absence
N	2	fault in recording equipment
O	0	





The final selection of seventy-five students, five from each teacher's class, ensured that at least one-third of the students to whom each teacher taught reading were involved in the study.

The chronological ages of these seventy-five students ranged from eight years to twelve years eleven months. The IQ's of the students ranged from fifty-one to ninety-five. Thirty-nine of the students were girls and thirty-six were boys. Table 3 reports the chronological age, IQ, and sex for each of the five students selected from each of the fifteen teachers' classrooms.

The IQ scores. The IQ scores for the seventy-five students were collected from the cumulative record cards. The scores recorded in Table 3 were the scores obtained on the most recent IQ test administered by personnel from the Edmonton Public School Board, prior to May 1969. For some students this score was obtained by means of the Wechsler Intelligence Scale for Children and in other cases by the Stanford-Binet Intelligence Scale. The IQ scores presented should be reviewed with caution. This caution is particularly advised since the IQ score may change over time. In some instances the most recent IQ score recorded in a cumulative record card was one obtained some four or five years prior to May 1969. The possibility that such scores might have changed over four years should not be ignored.

#### INSTRUMENTATION

Three instruments were used to collect the data for this study. Of these three, two were administered to obtain information about the teachers in the study. These were the Teacher Questionnaire and The





Table 3

Chronological Age, Intelligence Quotient  
and Sex for the Five Students  
Selected from Each Class

Teacher					Teacher					Teacher				
Students					Students					Students				
ID	IQ	CA	Sex		ID	IQ	CA	Sex		ID	IQ	CA	Sex	
A	1	80	10.0	F	F	1	66	12.0	F	K	1	68	10.2	F
	2	63	12.1	F		2	72	10.8	M		2	67	11.2	F
	3	56	11.9	F		3	72	10.6	F		3	77	11.8	M
	4	53	12.4	M		4	72	10.8	M		4	70	12.5	F
	5	77	9.4	M		5	82	11.3	M		5	78	10.6	F
B	1	73	10.3	M	G	1	85	10.3	F	L	1	68	8.0	M
	2	64	12.2	F		2	75	10.0	M		2	65	10.4	M
	3	70	10.3	M		3	93	11.1	F		3	62	11.2	F
	4	53	11.0	F		4	62	11.11	F		4	87	11.1	F
	5	77	10.10	M		5	80	11.5	F		5	69	8.2	F
C	1	54	12.2	M	H	1	73	10.11	M	M	1	77	12.6	M
	2	70	10.9	M		2	76	12.1	F		2	56	11.10	F
	3	94	10.7	M		3	78	10.11	F		3	78	11.10	F
	4	69	10.6	M		4	76	10.2	F		4	57	11.6	F
	5	63	11.3	F		5	78	11.6	M		5	70	8.9	F
D	1	79	11.2	F	I	1	90	10.5	M	N	1	95	11.2	M
	2	72	10.3	F		2	88	9.10	F		2	79	12.0	F
	3	51	11.1	M		3	68	11.2	M		3	88	12.3	M
	4	72	12.2	M		4	75	10.10	M		4	89	11.5	M
	5	76	11.3	F		5	71	9.7	M		5	67	11.9	M
E	1	77	10.3	M	J	1	77	12.4	F	O	1	79	11.7	F
	2	77	11.0	M		2	78	11.8	M		2	77	11.4	M
	3	74	9.4	F		3	66	12.11	F		3	70	12.1	F
	4	77	9.1	M		4	68	10.9	F		4	52	11.4	M
	5	66	11.2	F		5	69	11.10	F		5	84	9.11	M



Informal Teacher Interview. The third instrument was the Smith IRI which was administered to the seventy-five selected students. Each instrument will be discussed in turn, those administered to the teacher are presented first.

### The Teacher Questionnaire

This questionnaire (Appendix A) was devised by the researcher to obtain information concerning the professional characteristics of the teacher population as these characteristics relate to professional preparation and professional experiences. The questionnaire is now discussed with respect to format, provision for responding, administration and validity.

Format. The questionnaire consisted of three type-written pages and contained a total of twenty-four questions. It was divided into three major sections and each teacher was required to complete two of these sections. Directions for completing the questionnaire preceded the first question.

Section I consisted of ten questions and was intended for completion by all fifteen teachers. Five questions were related to professional preparation and five to professional experiences.

Section II consisted of six questions and was intended for completion by those teachers with degree status. All six questions were related to aspects of professional preparation.

Section III consisted of eight questions and was intended for completion by those teachers not presently holding a degree. All eight questions were related to aspects of professional preparation.



The division of the questionnaire into three sections served two purposes. Firstly, it facilitated the transfer of the responses onto summary data sheets. Secondly, it ensured that teachers were not required to spend time reading questions to which they could not possibly respond. For example, the question which asked teachers to specify the degrees they held had no relevance for those teachers who did not hold a degree, consequently it was included in Section II but not in Section III.

Provision for responding. Provisions for responding to the questions contained in the questionnaire can be described as structured in that the nature of the response was determined by the nature of the question. However, the responses were not totally structured in that, for example, teachers were required to state the number of years they had taught in the special class situation rather than being required to select from previously established categories.

Administration. A questionnaire was distributed to each teacher by the researcher. Although directions were written on the first page of the questionnaire these were repeated verbally by the investigator and the three sections were discussed. The teachers were asked to return the questionnaire within two weeks and a stamped addressed envelope was provided for this purpose. All fifteen teachers cooperated by returning the questionnaire within the specified time.

Validity. The purpose of this questionnaire was to collect information concerning the professional characteristics of the special class teachers. In identifying aspects of teacher preparation and





experience which might be classified as professional characteristics the investigator was guided by those characteristics identified as such in previous studies. Three researchers, whose studies were reviewed in Chapter 2, identified the following as professional characteristics:

1. Years of professional training (Tetley, 1964)
2. Course work in reading (Millsap, 1962; Tetley, 1964)
3. Years of teaching experience (Millsap and Tetley)
4. Grade level and years of experience at that grade level (Attea, 1966).

In their studies, Millsap, Tetley and Attea were concerned with regular grade teachers. The professional characteristics they identified were defined as professional characteristics in the present study. However, since this study was concerned with special class teachers, the inclusion of course work in special education, and experience in special classes as professional characteristics appeared logical.

The professional characteristics identified in this study were selected on the basis of their previous identification as professional characteristics by other researchers. It is therefore maintained that this questionnaire has content validity in that it does determine the professional characteristics of the teachers involved in this study.



### The Informal Teacher Interview

In order to collect information that might contribute to a more meaningful interpretation of the findings concerning teachers' estimates of instructional level, the researcher arranged for an informal interview with each of the fifteen teachers. To ensure some continuity in the topics explored during the interview a list of seven questions was prepared in advance. These questions are recorded in The Informal Teacher Interview (Appendix B).

Whereas the Teacher Questionnaire was concerned with quantitative data relating to the professional characteristics of the teachers The Informal Teacher Interview was concerned with eliciting information pertaining to their classroom practices, their professional activities and their views on certain aspects of special education.

Each of the individual interviews took place on the day the researcher visited each of the schools for the purpose of administering the Smith IRI to the students. The exact time and place for the interview was established by the teachers. Usually the interview was held in the teacher's classroom during the noon hour recess.

The questions contained in The Informal Teacher Interview were read by the researcher and the teacher was invited to respond orally. The original intention to record the responses of the teachers on tape was abandoned when the first teacher interviewed expressed reluctance at having her responses recorded. To preserve a degree of consistency the responses of all fifteen teachers were recorded in long hand. The



written record was identified by the alphabet letter assigned to the teacher.

While the nature of the responses was to some extent limited by the nature of the questions, within each question a wide range of responses were possible. All responses were accepted by the researcher. In circumstances where the response was limited in nature no pressure was applied in an attempt to solicit more information, although the teacher was asked if she wished to add more to her answer before the researcher proceeded to the next question.

Two identifiable factors may have limited the responses offered by the teachers. Firstly, the teachers may have limited their responses to accommodate the researcher, who was recording in long hand. Secondly, they may have felt pressured by the limited time available before the children returned to the classroom.

Despite these limitations, the interview was characterized by an informal and pleasant atmosphere. It is not impossible that the teachers' awareness that the researcher was also a special class teacher may have contributed positively to the general tone of the interview.

### The Informal Reading Inventory

To investigate the estimates made by teachers concerning the instructional reading levels of EMRs an IRI was administered to each of the EMRs in the sample. In this study, the IRI administered to each student consisted of a selection from either Graded Selections for Informal Reading Diagnosis, Grades One through Three (Smith and





others, 1959), or Graded Selections for Informal Reading Diagnosis Grades Four through Six (Smith and Harris, 1963).

Both the above publications appear in book form and together contain a series of stories found in each of the reading texts of a basal reading series, grades one through six. Two stories represent each of the texts, one story being selected from the early part of each book, and the other from the latter part. In all, twenty-four complete stories are reproduced, each being accompanied by black and white reproductions of the illustrations contained in the original basal reading text.

The stories contained in the Smith IRI—Grades Four through Six are considerably longer than those contained in the companion volume. These stories are, therefore, sub-divided into several parts, each part constituting a selection which may be used separately. In this study students reading a selection from the Smith IRI - Grades Four through Six, read one part of a story and not the entire story.

Each story, or part of a story where sub-divisions occur, is followed by two sets of questions, one set being designated as Literal Comprehension Questions and the other as Interpretation Questions. With few exceptions, a total of twenty questions follow each story. Both sets of questions were asked in this study.

The Smith IRI selections are somewhat longer than those usually included in IRIs. However the Smith IRI was chosen for the reasons described below.

Firstly, the selections contained in the Smith IRI were





selections which the students were not likely to have read. Certainly no teacher was using the basal reading series from which the selections in the Smith IRI were taken. As noted in Chapter 2 there was agreement among reading authorities (Harris, 1962; Johnson & Kress, 1965) that IRI materials should preferably be those with which the reader is not familiar.

A second reason for selecting the Smith IRI concerned the format in which it appears. This format is similar to that of the basal reading series used by many of the teachers. Illustrations accompany the stories, though they are in black and white rather than in colour. Size of print is similar to that normally found in a conventional reading series. It was felt that students would be less disturbed by such visually familiar material.

Thirdly, the Smith IRI contains two sets of questions following each selection. The total number of questions is usually twenty. This is in contrast to many published IRIs, which frequently follow each selection with less than ten questions and frequently as few as five. Furthermore ten of the twenty questions were concerned with interpretive comprehension. The need to question beyond the literal level was emphasized in Chapter 2.

No research studies using the Smith IRI were located and the validity of its use as an instrument for determining instructional level reading rests with its recommendation for this purpose by a number of authorities (Austin & Huebner, 1961; Zintz, 1970, Harris, 1962).



Not all the selections in the Smith IRI were used in the course of this investigation. Only four of the seventy-five students read selections from the Smith IRI - Grades Four through Six. The remaining seventy-one students read selections from the Smith IRI - Grades One through Three. Consequently, certain selections were read by a number of students. One selection, for example, was read by as many as twelve students. The Smith IRI - Grades One through Three was used more extensively because a greater number of students were using instructional materials at, or below, the grade three level.

Details concerning the Smith IRI selections used, and the frequency with which each was used, are contained in Appendix C.

#### DETERMINING READABILITY LEVELS

In this study the accuracy of teachers' estimates concerning the instructional levels of EMRs was determined by the scores students attained on the Smith IRI. It was therefore essential that the selection read by each student approximate, with respect to level of difficulty, the instructional material assigned by the teacher.

Readability levels were calculated for each selection contained in the Smith IRI. Similarly, readability levels were calculated for one story in the instructional materials of each of the seven students selected from each of the teacher's classrooms. With respect to the instructional materials, the story used was the one following the story reached by the student three days prior to the administration of the Smith IRI.



### The Readability Formulas

Two formulas were used to calculate the readability levels of both the Smith IRI selections, and the stories from the students' instructional materials. The Spache Readability Formula (The Spache Formula) (Spache, 1968) was applied to all instructional materials designated as suitable materials for grades one through three, and to the selections contained in the Smith IRI - Grades One through Three.

A Formula for Predicting Readability (The Dale-Chall Formula) (Dale and Chall, 1948) was applied to all instructional materials designated as suitable materials for grades four through six, and to the selections contained in the Smith IRI - Grades Four through Six.

The Dale-Chall Formula was chosen because Klare (1963) cites it as one of the consistently more accurate and more predictive formulas for reliable readability (p. 120). The choice of The Spache Formula was prompted by the fact that it was one of the few formulas suitable for calculating readability levels for materials designated as suitable for grades one through three, and because, like The Dale-Chall Formula, it is based on the assumption that the elements of sentence length and the proportion of hard words are good predictors of readability. Although two formulas were used a degree of consistency was preserved. These two formulas were used by Leibert (1965) to match materials, specifically informal reading inventory selections and the Gates Advanced Primary Reading Test. Both formulas were also employed by McCracken (1964) to analyse basal readers and by Kasdon and Kelly (1969) to estimate the difficulty level of basal readers.





It was felt that the use of these two readability formulas, in conjunction with each other, by other researchers, gave some further support to their use in this study.

In applying the two formulas the directions supplied by the respective authors were followed. One exception, however, was made. Dale and Chall recommend that for passages up to 300 words their formula be applied to the entire passage rather than a sample of 100 words. This recommendation was followed and was applied also when applying The Spache Formula. Since the number of words in the Smith IRI selections, and in the stories from the students' instructional readers, were both more, and less than, 300 words, the decision was made to apply the relevant readability formula to the entire story or selection, regardless of length, rather than repeatedly changing the procedure.

The raw score yielded by The Dale-Chall Formula was used rather than the less precise grade placement level. It should be noted that the readability formulas were not used in order to determine the grade level of the materials involved. In this study they were used as a standard for comparing two sets of reading materials, in order that students would read IRI selections which were of approximately the same difficulty level as their instructional materials.

#### ADMINISTRATION AND SCORING OF THE SMITH IRI

The procedures involved in the administration and scoring of the Smith IRI are presented, in their entirety, at this point. The



description will be presented in two sections. The first section will deal with the administration, and the procedures involved in preparing for the administration. The second section will identify the scoring procedures.

#### Preparation and Administration

In preparing for the administration of the Smith IRI the researcher selected the appropriate selection from either the Smith IRI - Grades One through Three or the Smith IRI - Grades Four through Six. The appropriate selection was that which most closely approximated, with respect to level of difficulty, the story the student would read next in the instructional materials assigned by the teacher. Appendix D reports for each student: (1) the readability level of the story from his instructional reader, and (2) the readability level of the Smith IRI selection chosen.

On arrival at the school a room, provided by the principal, was prepared for the administration of the Smith IRI. Usually this was a small room and was relatively free from noise except those noises which occur as the activities of a school are pursued. Permission was received from the principal to put a notice on the door requesting no one to enter. Once the room was prepared consultations were held with the teacher.

Teacher consultations. Before the commencement of morning school the teacher was told which five students would be involved in the administration of the Smith IRI. It was determined then whether any of the students exhibited characteristics which would render the



administration of the IRI impractical and the scores questionable. Where necessary students were deleted and replaced.

The order in which the five students read was established with the teacher. This procedure was adopted in an effort to ensure that no student was prevented from participating in an activity he enjoyed.

The teacher was asked to send a copy of each student's instructional reading material with the student when his turn arrived. When the students arrived, a check was made to verify that students who wore glasses were wearing them.

Reading the selection. During the reading of the selection the student sat at a desk, or table, facing the researcher. No other persons were present. The tape recorder was placed to the side of the table, but in full view of the student. The microphone was in front of the student.

Before reading the selection, the student was told that the investigator was interested in the way students read and the way in which they answered questions. The student was also told that his oral reading, and the answers he gave to questions, would be recorded, but that no other persons would hear the tape. Assurance was given that a small portion of the tape would be replayed to the student at the end of the session if he would like this.

The book containing the selection to be read was then handed to the student opened at the correct page. The first page of the selection contained an illustration. The student's attention was directed toward this illustration and he was asked to read the story





to find out what the people, or animals, in the picture were doing and what happened to them in the story. Since the questions following the selections were varied and encompassed the entire selection, a more specific purpose was not proposed. The student was told that when he had read the selection he would be asked to answer some questions. The title of the story was read to the student and he was asked to begin reading.

During the reading of the selection, words were pronounced for the student if he made no attempt to pronounce the word, and at the same time, made no attempt to continue reading. Words were also pronounced if the student's attempts at pronunciation were unsuccessful and the student made no attempt to continue reading.

The proper nouns in a selection were pronounced for a student if they were incorrectly pronounced when first encountered. They were not pronounced again unless the student showed signs of distress at not knowing the word, or made no attempt to continue reading.

In circumstances where a student became restless and agitated while reading, and in addition experienced difficulties in reading the selection, that student was told he could stop. Five students from the classes of five different teachers were told to stop reading. Where this decision was made, the reading performance of the student was characterized by word recognition errors, repetitions, mumbling, and a tendency to stop reading completely. These five students were not deleted from the study. They were asked questions which applied to the section they had read. If five questions only were asked, and



five correct responses were received, the per cent accuracy score was 50 per cent, even though in terms of the number of questions asked the student was 100 per cent correct. Per cent accuracy score for word recognition was arrived at as for other students. This procedure is described later in this section.

Questioning procedures. With the exception of three questions, each of the questions following each of the selections was initially stated as it appears in the Smith IRI. Details concerning changes to these three questions are reported in Appendix E.

In circumstances where a student made no response to a question, the question was repeated, or rephrased. In rephrasing the question the language was sometimes simplified. Two part questions were frequently repeated.

Where a student's response bore no relationship to the question asked, the student was prompted to supply reasons for the answer given. If the reason seemed to imply a misconception of the question asked, the question was repeated.

Where partial answers were given the student was prompted to supply more information.

In rephrasing a question for a student, the investigator was careful not to provide the student with an answer. Prompting after a partial answer consisted of such phrases as "Can you tell me any more" or "Is there anything else you would like to say?" The rationale for such actions was based on the fact that in this study a student's comprehension of the material read was the important factor, not his understanding of the question.



Selections from the instructional material. At the completion of the Smith IRI, each student was asked to read between 100 to 200 words from the instructional reading materials assigned by the teacher. This reading was also recorded and later scored for word recognition errors. These scores were examined in conjunction with the word recognition scores obtained on the Smith IRI. It was felt that a similarity between the two scores would give an additional indication of the suitability of the Smith IRI selection from the point of view of difficulty level. A pronounced discrepancy might have indicated a mis-matching of materials.

#### Scoring Procedures

Three sets of scores were computed for each student involved in the study:

1. A word recognition score
2. A literal comprehension score
3. An interpretative comprehension score.

Using the recordings made, word recognition errors were marked on a copy of the selections read. This procedure was followed for both the Smith IRI and the instructional reading materials. Written transcripts were made of the answers to both sets of comprehension questions.

Counting oral reading errors. Listed below are those oral reading errors noted in scoring the reading performance of each student, for the purpose of obtaining a word recognition error score:

1. substitution - saying one word for the one in print





2. additions - inserting a word or words or adding an affix
3. omission - omitting a word or words or omitting an affix
4. pronunciation - an unknown word is pronounced for the reader
5. mispronunciation - saying a word incorrectly.

Oral reading errors involving proper nouns were not scored as errors. This decision, and the decision to include the five errors mentioned was based on the discussion of this topic in Chapter 2.

In counting the errors the following rules were observed:

1. Mispronunciations of the same word were counted as one error each time they occurred.
2. Different types of errors occurring at any one place in the reading were counted as one error.
3. The omission of one or more consecutive words was counted as one error.
4. The addition of one or more consecutive words was counted as one error.
5. A second error, caused by forcing grammatical agreement with a previous error was counted as one error.

The word recognition error score was obtained by adding together all errors made.

Scoring comprehension responses. As advocated in the directions included in the Smith IRI a score of ten was allocated to each correct response. No marks were allowed for an incorrect response. The directions make no provision for the grading of partially correct



responses. For the purposes of this study, the decision was made by the researcher to allow a score of five for a partial answer. Partial answers were defined as follows:

1. The naming of one item or event when two were requested.
2. A correct response to one part of a two part question.

Converting to per cent accuracy scores. In converting the word recognition error score to a per cent accuracy score the following procedures were employed:

1. The number of errors made was divided by the number of words read, yielding a per cent error score.
2. The per cent error score was subtracted from 100, yielding a per cent accuracy score.

Since the total number of marks for both literal and interpretive comprehension equalled 100, no conversion to per cent accuracy was necessary.

Inter-judge reliability. The responses made, by all students, to the literal and interpretive comprehension questions were evaluated independently by three judges, one of whom was the researcher. The other two judges were graduate students at the University of Alberta. Both had teaching experience at the elementary school level. Guidance, in evaluating the student response, was given to these two judges. They were asked to read each story from the Smith IRI, and study the questions and use the answers provided as a reference point. The researcher explained the concept of partial answers. A record was kept of the final score achieved by each student for both literal and



interpretive comprehension. Inter-judge reliability was calculated for these total scores.

The Arrington formula (Feifel and Lorge, 1950),  $2a/(2a + d)$ , where a refers to the number of agreements, and d to the number of disagreements, was used as a measure of inter-judge reliability. Only those scores differing by more than 5 per cent were recognized as a disagreement. The percentages of agreement between each of the independent judges is reported in Table 4. The percentage of agreements listed in the table were considered satisfactory.

Table 4  
Percentage of Agreement Between Researcher  
and Independent Judges in Scoring the  
Literal and Interpretive Questions

Independent judges	Percentage of agreement	
	Literal questions	Interpretive questions
A*-B	98.6	85.8
A-C	98.0	85.8
B-C	98.0	79.0

\* A is the researcher

DATA COLLECTION

The data were collected in May and June 1969. Several stages were involved and are reported below.





### Instructional Materials in Use

Early in May information concerning the instructional materials assigned to each student enrolled in the fifteen Junior Opportunity Classes was obtained from the teachers. This information revealed the following:

1. The name of the reading series
2. The title and level of the reader
3. The edition.

Copies of every reader in use were obtained by the investigator. A list of the particular series, or selection of series, used by each teacher are reported in Appendix F. These data were collected in order to ensure that any reader for which readability levels were to be calculated was readily available.

### Specific Details of Instructional Materials

Readability levels were calculated for those instructional materials used by the seven students randomly selected from each of the fifteen teachers' classrooms. Three days prior to the administration of the IRI, teachers were asked to supply the following information concerning each student:

1. The series being used
2. The name and level of the reader
3. The page number reached that day.

### School Visits

Each school was visited by the investigator for approximately one school day. During the visit, the Smith IRI was administered to



five of the seven selected students. The Teacher Questionnaire was distributed to the teacher and was returned, by mail, at a later date. The Informal Teacher Interview was held during the visit.

#### ANALYSIS OF THE DATA

In analysing the data to answer research question 1 (To what extent do special class teachers make accurate estimates concerning the instructional reading levels of the EMRs in their classes, and to what extent do they vary in assigning appropriate instructional materials when word recognition, literal comprehension and interpretive comprehension are considered separately?) several steps were required. These are now enumerated:

1. The three scores made by each student on the Smith IRI were examined in conjunction with each other to determine:
  - A. The number and percentage of students meeting the full criteria
  - B. The number of accurate estimates made by each teacher
  - C. The number of accurate estimators among the fifteen teachers
2. The word recognition, literal comprehension and interpretive comprehension scores of the students were examined separately to determine for each aspect:
  - A. The number and percentage of students meeting the criterion for instructional level
  - B. The number of accurate estimates made by each teacher



- C. The number and percentage of accurate estimators among the fifteen teachers
- D. The number and percentage of students reading at frustration level
- E. The number and percentage of students reading at frustration level for each teacher.

#### Analysis of Data from The Teacher Questionnaire

The data to answer research question 2 (What are the professional characteristics of teachers engaged in the education of the educable mentally retarded?) was obtained by means of the Teacher Questionnaire. The written responses of the teachers were recorded on two data summary sheets: one relating to the professional preparation of the teachers, and the other to their professional experiences.

The data sheet relating to the professional preparation of the teachers included details concerning:

1. Years of university education (recency of initial preparation; and most recent involvement at university)
2. Degree status (degree held; recency of acquisition; where acquired)
3. Formal course work in reading (content; recency; where acquired)
4. Formal course work in education (content; recency; where acquired)
5. Route (elementary or secondary)





#### 6. Major field of study.

The data sheet relating to the professional experiences of the teachers included details concerning:

1. Years of classroom experience
2. Years of regular grade experience
3. Level and recency of regular grade experience
4. Years of special class experience
5. Type of special class experience
6. Other experiences in the educational situation.

These data once recorded were analysed to facilitate the following:

1. The presentation in tabular form of a profile for each of the fifteen teachers; one relating to professional preparation and one to professional experience.

2. The presentation and discussion of each professional characteristic in relation to the fifteen teachers. Where feasible categories were established and comparisons were drawn.

It was intended also to examine these data to determine whether, teachers designated as accurate estimators, held in common professional characteristics which distinguished them from their less accurate colleagues. The purpose of this analysis was to answer research question 3.

#### Analysis of Data from The Informal Teacher Interview

The analysis of data from The Informal Teacher Interview required first the recording of the teachers' responses on to data



summary sheets. When this was accomplished the responses, where possible, were categorized.

This data provided an answer to the fourth research question (What procedures to special class teachers employ when estimating the instructional levels of their students?), and in addition provided information concerning the instructional practices of special class teachers, and their opinions concerning special education.



## Chapter 4

### FINDINGS: PROFESSIONAL CHARACTERISTICS

A secondary purpose of this study was to identify and describe the professional characteristics of the fifteen special class teachers. The findings with respect to these characteristics are now reported. Their presentation in advance of the major findings of this study is justified by the belief that knowledge of the professional characteristics of the teachers will render the major findings more meaningful to the reader.

The description of the teacher population which follows is confined to those professional characteristics previously identified as professional preparation and professional experience. The information to be presented was obtained by means of the Teacher Questionnaire.

The description is presented in two parts, the first dealing with the professional preparation of the teachers and the second with their professional experiences.

#### PROFESSIONAL PREPARATION

Professional preparation in this study applies to the following:

1. Years of university education
2. Degree status
3. Formal course work in reading
4. Formal course work in special education





5. Route (elementary or secondary)

6. Major field of study,

and such aspects as recency, course content, and institutions attended where these apply.

Each of the preparational characteristics will be discussed in turn, but the discussion is preceded by Table 5 which presents a profile for each of the fifteen teachers. This table will be referred to throughout the discussion. Certain characteristics will be discussed in more detail and additional tables presented.

#### Years of University Education

This term is used to include any formal study which prepared the teachers for their profession. A year of normal school<sup>1</sup> taken at a teacher training institution, even though the institution was not a university, was therefore recognized as a year of university education. The basis for this decision is the custom of Canadian universities to grant some credit for a year of normal school when teachers, with this training, apply for entrance to a degree program. Furthermore, the size of the population involved did not merit the establishment of more than the one category, that being, years of university education.

The number of years of university education among the fifteen teachers varied from one to six years, although no teacher had five years. Approximately one-half or seven of the teachers had four or

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<sup>1</sup>Canadian institution which offered one year of professional training to intending teachers (Phillips, 1957).



Table 5

Summary of Professional Preparation for the  
Teacher Population and Individual Teachers

Teacher	Years of university education	Degree status	Number of reading courses	Number of special education courses	Route
A	1				elem
B	2				elem
C	2				sec
D	6	B.A.,M.A.	1 +	1	elem
E	4	B.Ed.	1	2	elem
F	4	B.A.,B.Ed.	$\frac{1}{2}$		elem
G	4	B.S.E.E., M.A.	$\frac{1}{2}$	$\frac{1}{2} + \frac{1}{2}$	elem
H	4	B.Ed.	1	$\frac{1}{2}$	sec
I	2			$\frac{1}{2} + \frac{1}{2}$	elem
J	6	B.Ed.,B.A.		1	sec
K	1		$\frac{1}{2} + \frac{1}{2}$	$\frac{1}{2}$	elem
L	3			1	elem
M	4	B.Ed.			elem
N	1				elem
O	1		1	2	elem



more years. Table 6 identifies the teachers according to the years of university reported.

Table 6  
Teachers Identified According to  
Years of University Education

No. of years	Teachers
1	A, K, N, O
2	B, C, I
3	L
4	E, F, G, H, M
5	
6	D, J

Additional information, requested of the teachers, permits further discussion of this characteristic with respect to the time at which initial preparation was embarked upon, and the recency of involvement with university study as it represents the efforts of the teachers to increase their qualifications. For the purposes of the description which follows the teachers are grouped according to the number of years of university they presently held.

Table 7 identifies each teacher according to the approximate time period during which she initially trained for the profession (training incurred before entering the profession). This table serves as a basis for the discussion which follows.





Table 7  
Teachers Identified According to the Approximate  
Time of Initial Preparation

Approximate time period	Teachers
1965-1969	I
1960-1964	
1955-1959	F, G, H
1950-1954	B
1945-1949	J
1940-1944	C, E
1935-1939	K, L
1930-1934	A
1925-1929	N, O, M, D

Teachers with one year of university education. Teachers A, K, N and O reported one year of university. All four had acquired this year before 1936. Two teachers, Teachers K and O had taken courses toward a further year. Teacher O had taken seven courses but several were not recognized by the University of Alberta which required two more courses before granting a second year. Teacher K had acquired courses in the United States and was to attend a summer session in 1969. Both Teachers O and K had acquired their additional courses within the last ten years.

The two remaining teachers with one year of university



education gave no indication of having attended university for any period of time since their initial training which had taken place at least 30 years prior to this investigation.

Teachers with two years of university education. Three teachers, Teachers B, C and I indicated two years of university education. Teacher I had only recently acquired these two years and in fact was just completing her first year of teaching. This teacher had taken one course since completing this initial preparation. She also planned to attend summer session in 1969. Teacher C had taken an initial year of university education in the early nineteen forties. She had acquired a second year since that time and was working toward a third year. Teacher B had initially two years of university education in the early nineteen fifties and had returned to university later in that decade but did not complete a further year.

Generally the teachers with two years of university education had acquired their initial preparation more recently than those teachers with one year. It is noticeable too, that all the teachers with two years of university education had made efforts to increase their qualifications. This was not the case with all the teachers with one year of education.

Teachers with three years of university education. Only one of the fifteen teachers, Teacher L, indicated 3 years of university education. This teacher failed to indicate when her initial period of preparation took place, however other information places this preparation in the nineteen thirties. Teacher L required only two



courses to complete a fourth year and had returned to university for a full year in the early sixties. She had acquired other courses since that time and anticipated completing the requirements for an education degree within the near future.

Teachers with four years of university education. Altogether five of the fifteen teachers noted four years of university education. These were Teachers E, F, G, H and M. This group of teachers had taken their initial periods of training at various times although Teachers F, G, and H noted initial years of university in the nineteen fifties.

Teacher F had experienced initial preparation for one year and had then proceeded to acquire courses through attendance at summer sessions and evening credit programs. This teacher also returned to university for a full year of study in the mid sixties.

Teacher G had trained initially in the mid fifties though it was not possible to stipulate the length of this period. She had returned to university for a full year in the early sixties.

Teacher H had attended university initially for two years in the late fifties and had continued to take courses at summer sessions and in evening credit programs.

Teachers E and M, the remaining teachers with four years of university education had taken their initial preparation at an earlier date than the other three teachers in this group. Teacher E had, originally, one year of university education taken in the early forties. She had not returned to university as a full time student





at any time but had, and was continuing to take courses at the university level.

Teacher M had prepared initially for the profession in the nineteen twenties. A year of full time university followed in the late fifties. No further course work had been embarked upon since that date.

This group of teachers had all continued their professional preparation after the initial year or years of university education. All but one had been involved in course work within the last ten years and three had returned to university at some point in order to increase the extent of their professional preparation.

Teachers with six years of university education. Within the teacher population of fifteen there were two teachers, Teachers D and J, who reported six years of university education. Teacher J had initially attended university for three years in the nineteen forties and had proceeded to acquire the additional three years through attendance at summer sessions and evening credit programs. This teacher was still involved in formal course work.

Teacher D had prepared initially for the profession in the nineteen twenties. She had continued to increase her years of university education and eventually had returned to a university in the United States for a year of graduate study in the late nineteen forties. One course was taken in the summer of 1950 but no formal course work had been embarked upon since that time.

Summary. As was stated at the beginning of this discussion,



the years of university education among the fifteen teachers varied considerably. There was also considerable variability in the recency of their involvement with formal course work at the university level. Eight of the fifteen teachers had increased their actual years of university education since initial training, however, only one teacher had embarked upon initial preparation within the last ten years. For nine teachers initial preparation had occurred at least twenty years previously.

While eight, or slightly more than one half of the teacher population, had increased their actual years of university education since initial training, a greater number of the population had been involved in taking university courses throughout their professional careers. Of the fifteen teachers, thirteen had been involved with university level preparation since initial training, and for nine of these teachers this involvement had taken place within the previous ten years.

These figures indicate that although all but one of the teachers had prepared initially for teaching, ten or more years previously there had been recognition, on the part of the teachers, for the relevance of upgrading their university education.

#### Degree Status

Table 5 (p. 77) indicates that seven of the fifteen teachers held degrees while eight did not. Of those teachers not holding degrees Teacher L anticipated the completion of a Bachelor of Education (B.Ed.) degree within the near future.



The seven teachers holding degrees were Teachers D, E, F, G, H, J, and M. Of these seven teachers, four held two degrees.

Teachers with one degree. A total of three teachers reported holding one degree. These were Teachers E, H, and M. In each instance the degree held was a B.Ed.

Teachers with two degrees. Four teachers held two degrees. However, whereas two of these teachers held one undergraduate and one graduate degree the other two each held two undergraduate degrees.

Teachers F and J both held a B.Ed. and a Bachelor of Arts (B.A.). Teacher J had completed the requirements for a B.Ed. degree and then a B.A. Both degrees were acquired at the University of Alberta where there is an arrangement that students with a B.Ed. degree may obtain a B.A. degree by completing additional courses (usually six) in the Faculty of Arts.

Teacher F indicated she had completed a B.Ed. degree after obtaining a B.A. She reported that the B.Ed. degree was granted on the basis of her year at teachers' college (three courses credited) and additional courses (number not specified) in the Faculty of Education. Both degrees were completed at a Canadian university, but not the University of Alberta.

Teachers D and G both held a graduate and an undergraduate degree. Teacher D held a B.A., and a Master of Arts degree (M.A.). This teacher had specialized in the area of reading at the graduate level. Teacher G had acquired a Bachelor of Science in Elementary Education (B.S.E.E.) and later acquired an M.A. with specialized





study in the area of special education.

Institutions attended. With few exceptions the degree holding teachers had obtained their degrees at Canadian universities. Teacher G had obtained a B.S.E.E. outside of North America and an M.A. in the United States. Teacher D had obtained a B.A. in Canada and an M.A. in the United States. The remaining five teachers had all obtained their degrees in Canada with four graduating from the University of Alberta.

Recency of degree. With respect to recency only the last degree obtained was considered. Teachers E, F, G, and H had all obtained their degrees within the last ten years. Teachers J and M had acquired their degrees within the last ten to fifteen years, while Teacher D's degree was obtained approximately twenty years prior to this study.

#### Formal Course Work in Reading

The teachers were asked to list all courses they had taken which were specifically related to the teaching of reading. In many cases teachers failed to indicate whether they had taken an introductory course, although their preparation per se tended to indicate that this may have been so. In this discussion therefore, preparation in reading refers to course work beyond the introductory level.

A total of eight teachers failed to indicate preparation in the teaching of reading beyond the introductory level. Of these eight teachers two did indicate an introductory course and the possibility exists that a proportion of the remaining six teachers would also have taken such a course. However since two of these six teachers



prepared themselves for teaching at the secondary level it is feasible to suggest they had no preparation in the teaching of reading. Both these teachers had received their university education at the University of Alberta which does not require student teachers, following the secondary route, to take such a course.

As indicated by Table 5 (p. 77) a total of seven teachers indicated that they had taken courses related to the teaching of reading which were beyond the introductory level. With the exception of one teacher, Teacher D, all had acquired this preparation within the last ten years.

Course work at the graduate level. Two teachers, Teachers D and G, indicated courses exclusively at the graduate level. Both teachers had acquired their courses at institutions in the United States. Teacher G had taken a half course and Teacher D had taken more than one full course. The information supplied by these teachers was not sufficient to determine the nature of these courses.

Course work at the undergraduate level. In all, five of the seven teachers, Teachers E, F, H, K, and O had taken undergraduate courses relating to the teaching of reading. Teachers E and H had both taken full courses in reading methods at the University of Alberta. Teacher E had taken a course concerned with reading methods at the elementary school level, while the course taken by Teacher H was concerned with reading methods at the secondary school level.

A further two teachers, Teachers F and O, had each taken course work related to remedial reading techniques. Teacher F had





taken a half course while Teacher O had taken a full course. Both teachers had acquired this training at Canadian universities, though not at the University of Alberta.

The remaining teacher, Teacher K, had taken two half courses at an institution in the United States. Both courses were concerned with the teaching of reading as it relates to the atypical child, specifically the disadvantaged child.

Summary. Approximately one half, or seven of the fifteen teachers, had engaged in preparation concerned with the teaching of reading which was beyond the introductory level. Four of these teachers had acquired their courses at Canadian institutions. A total of eight teachers reported no preparation in reading beyond the introductory level and it is possible that a number of these teachers may have received no preparation whatsoever in this subject area.

#### Formal Course Work in Special Education

Table 5 (p. 77) indicates that nine of the fifteen teachers had taken formal course work related to the field of special education. As with the course work related to the teaching of reading all but one teacher, again Teacher D, had acquired this preparation within the last ten years. Courses at both the undergraduate and graduate level were indicated by the teachers.

Course work at the graduate level. Three teachers, Teachers E, G, and J, had taken courses related to special education at the graduate level. Teachers G and J had courses exclusively at the graduate level. Teacher G had acquired two half courses in the United





States; one relating to general teaching methods for exceptional children and one concerned with the psychology of exceptional children. Teacher J had taken a course in the education of the physically handicapped at the University of Alberta. Teacher E had acquired two full courses at the University of Alberta one of which was a graduate course concerned with the education of the physically handicapped. The remaining course was a full course at the undergraduate level and was a survey course dealing with several areas of exceptionality.

Course work at the undergraduate level. Of the nine teachers with preparation in the area of special education, six had courses exclusively at the undergraduate level. Teachers H and K each had one half course. Teacher H had taken a half course at the University of Alberta which was concerned with exceptional children per se, while Teacher K had acquired a half course in the United States which was related to the education of the emotionally disturbed child.

Teachers D, I, and L had each taken a full course at the University of Alberta. Teachers D and L had acquired the survey course mentioned earlier in the discussion. Teacher I had taken a half course which was a survey course, and in addition a half course related to the education of the emotionally disturbed child.

The remaining teacher, Teacher O, had taken two full courses, one of which was a survey course and the other a course related to the education of the retarded child. Both were taken at a Canadian university.

Summary. A total of nine teachers had acquired courses



specifically related to the area of special education. Of these, six had acquired these courses at the University of Alberta. In all, six teachers had been involved in a survey course dealing with several areas of exceptionality. Of the three teachers with course work at the graduate level at least two had concerned themselves with the education of the physically handicapped. Only one teacher had taken a course specifically related to the education of the mentally retarded child.

#### Formal Course Work in Special Education and Reading

Examination of Table 5 (p. 77) in relation to course work in special education and reading reveals that six of the fifteen teachers had been involved in course work related to both these areas. Furthermore five of these six teachers had acquired this preparation for their classroom teaching within the last ten years. Of the fifteen teachers, five indicated no course work in either area at any time.

Generally it can be stated that the teacher population had more preparation in the area of special education, than in the teaching of reading, where formal course work was concerned.

#### Route

In many universities student teachers are required to select a 'route' when working toward a degree in education. The term route is used here to designate a course of studies which prepares teachers for teaching positions at either the elementary or secondary level of education. Since the teachers involved in this study were essentially concerned with education at the elementary school level, they were





asked to specify for which level of education they had prepared themselves.

Within the teacher population twelve teachers had followed a route which prepared them to teach specifically at the elementary level while three had prepared for teaching at the secondary level. Table 5 (p. 77) indicates which teachers these were.

### Major Field of Study

Many universities require their student teachers to select a subject area to be studied in greater depth than other subjects which are involved in the program of studies. The subject selected is referred to in this study as the major.

The fifteen teachers were asked to identify their major but only nine teachers responded to this question. Those teachers who did not respond may, in fact, not have reached the point in their program where they would have been required to select a major field of study. This conclusion was drawn when it was noted that four of the teachers who did not identify a major had completed only one year of university.

The responses made by the nine teachers with respect to this professional characteristic were not included in the summary table, Table 5, but are presented here in Table 8. Majors for both first and second degree programs are identified.

Table 8 demonstrates the diversity of major fields among these nine teachers. No generalizations are possible but it is pertinent to note that three teachers had majored, or were majoring, in the areas of either reading or special education.





Table 8  
Major Field of Study Reported  
by Nine Teachers for First  
Degree and Second Degree

Teacher	Major field of study	
	First degree	Second degree
B	English	
C	Household economics	
D	English	Reading
F	History	
G	Elementary Education	Special Education
H	English	
I	Special Education	
J	Mathematics/Science	History/ Philosophy
M	Psychology	

Summary

The professional preparation of the special class teachers is characterized by diversity. Years of university education varied from the maximum usually associated with classroom teachers (six years) to the minimum required (1 year). While eight teachers did not indicate degree status, the degrees held by the seven teachers who did included both undergraduate and graduate degrees. While a proportion of the population had taken course work related to reading or to special education, there were teachers with course work in both areas and



teachers with course work in neither area. Although there was a certain conformity in the route which teachers had followed in their university preparation there was considerable variance in the major fields of study reported by nine of the teachers.

### PROFESSIONAL EXPERIENCES

The findings presented in this section are those related to the professional experiences of the teachers within the field of education. Professional experiences in this study are defined as:

1. Years of classroom experience
2. Years of regular grade experience
3. Level of regular grade experience
4. Years of special class experience
5. Type of special classes experience
6. Other experiences in the educational situation.

The professional experiences listed above will be discussed in turn. The discussion is preceded by a summary, Table 9, which presents a profile for each teacher for the first five professional experiences listed above. This table will be referred to throughout the discussion. Further tables and the discussion itself will in some instances supplement the information contained in Table 9.

#### Years of Classroom Experience

The number of years for which the fifteen teachers had taught in the classroom situation varied from one year to forty years. The exact number of years for which each teacher had taught is reported in Table 9.



Table 9

Summary of Professional Experiences for the  
Teacher Population and Individual Teachers

Teacher	Years of classroom experi- ence	Years of regular grade experi- ence	Level of regular grade experi- ence		Years of special class experi- ence	Type of special class experience		
			Elem.	Sec.		Junior	Other	Adapta-
						Oppor- tunity	Oppor- tunity	tion
A	17	10	yes	yes	7	yes		
B	15	6	yes	yes	9	yes		
C	18	15	yes		3	yes		
D	40	25	yes		15	yes		
E	20	13	yes	yes	7	yes		
F	8	4	yes	no	4	yes		
G	10	5	yes	yes	5	yes		
H	7	2	yes	no	5	yes		yes
I	1	0	no	no	1	yes		
J	21	20	yes	yes	1	yes		
K	19	17	yes	yes	2	yes		yes
L	14	8	yes	no	6	yes		
M	40	20	yes	yes	20	yes	yes	
N	15	14	yes		1	yes		yes
O	31	22	yes		9	yes		





It is perhaps possible to say that the teachers as a group were generally experienced teachers since twelve of the fifteen had taught for more than ten years. Table 10 identifies each teacher according to the approximate number of years of classroom teaching.

Only one teacher, Teacher I, had taught for less than four years. This teacher was in fact completing her first year of teaching.

Table 10

Teachers Identified According to Approximate  
Number of Years of Classroom Teaching

Years of classroom teaching	Teachers
0 - 4	I
5 - 9	F, H
10 - 14	G
15 - 19	A, B, C, K, L, N
20 - 24	E, J
25 - 29	
30 - 34	O
35 - 39	
40 - 44	D, M

Two teachers both reported from five to nine years in the classroom while only one reported from ten to fourteen years. A total of six teachers representing 40 per cent of the teacher population indicated their classroom experience to be from fifteen to nineteen years. The



remaining six teachers all indicated twenty or more years of classroom experience, two of whom indicated forty years.

#### Years of Regular Grade Experience

The specific number of years for which each teacher had taught in the regular grades is reported in Table 9 (p. 93). This table indicates that all but one of the teachers had, at sometime, taught in the regular grades, and that the regular grade experience of the teachers ranged therefore from no experience to twenty-five years experience. Table 9 (p. 93) further indicates that of the fourteen teachers reporting regular grade experience, this particular experience represented at least one-half of the total teaching experience for twelve of them.

A total of nine teachers had more than ten years of regular grade experience. This fact is demonstrated by Table 11 which identifies the teachers according to the approximate number of years in the regular grades. Four of the nine teachers reporting ten or more years had twenty years or more. All these teachers had spent as much, or more time, in the regular grades as in the special class. Six teachers reported less than ten years of regular grade experience. For five of these six teachers, regular grade experience constituted one-half, or less, of their total teaching experience. In other words these five teachers spent more or an equal amount of their total classroom experience in the special class. Only one of the teachers with less than ten years of experience had spent more years in the regular grades. This finding would seem to indicate



Table 11  
Teachers Identified According to Approximate  
Number of Years of Regular Grade Teaching

Years of regular grade teaching	Teachers
0 - 4	F, H, I
5 - 9	B, G, L
10 - 14	A, E, N
15 - 19	C, K
20 - 24	J, M, O
25 - 29	D

that teachers are entering special education earlier in their careers than did their colleagues with a greater number of years of experience. The expansion of special classes within school systems, and the growing emphasis placed on special education within the universities, could in part account for this trend. Three of these five teachers had taken course work concerned with special education.

Level of Regular Grade Experience

The kinds of regular grade experience reported by the teachers was designated as either experience at the elementary level or experience at the secondary level. Regular grade experience at the elementary level refers to teaching experience with grades one through six. Teaching experience at the secondary level refers to experience with grades seven through twelve.





Table 9 (p. 93) indicates that fourteen of the fifteen teachers had regular grade experience at the elementary level. Only Teacher I did not. This finding implies that all but one of the teachers had teaching experience with students who were of the same chronological age as students in Junior Opportunity Classes.

A total of seven teachers indicated that they had taught regular grades at the secondary level. Four teachers indicated clearly that they had no experience at this level. It was not possible to determine from the data supplied by Teachers C, D, N, and O, whether or not they had experience at the secondary level. However Teachers C, D, and N did indicate that they had taught in rural schools early in their teaching careers. Teacher C indicated experience with "ungraded" regular grades in the 1940s. Possibly this could have included experience with grades at the secondary level. Teachers D and N both indicated they had taught in rural schools before 1930. It is feasible that these schools could have been one room schools with students from grades one to twelve.

Recency. Since one teacher had no regular grade experience the data presented here refers to only fourteen teachers. Table 12 identifies the teachers according to recency of regular grade experience. The information contained in Table 12 indicates that six teachers had taught in the regular grades within a period of four years, while six had done so within a period of five to nine years. This means that eleven of the teachers had taught in the regular grades within a period not exceeding ten years. The remaining three teachers had not taught in the regular grades for a period ranging



Table 12  
Teachers Identified According to Recency  
of Regular Grade Experience

Recency of regular grade experience in years	Teachers
1	J, N
2	K
3	C
4	F
7	E
8	G, H, L, O
9	B
15	D
21	M
27	A

from fifteen to twenty years. In examining these data it was determined that the most recent regular grade experience immediately preceded the first year of special class experience for ten teachers. Table 13 indicates which teachers these were and the level of the regular grade experience where known. Table 13 also indicates the activity of the remaining five teachers before they began their initial experience in the special class.

A total of seven teachers were teaching in regular grades at the elementary level immediately before their first year in the



Table 13

Teachers Identified According to  
Experience Immediately Preceding  
Special Class Experience

Regular grade experience: elementary level	B, C, E, F, J, M, N
Regular grade experience: level not specified	D, K, O
Attendance at university	G, I
Non-professional experience	A, H, L

special class. Three other teachers were teaching in the regular grades but the level was not specifically reported. Two teachers indicated attendance at university, while three indicated they were not teaching. One teacher, Teacher A, had not taught for a period of twenty years before re-entering the profession.

In summary, it was found that ten teachers were actively engaged in regular grade teaching before entering the special class, two were attending university and three were neither teaching nor at university.

Years of Special Class Experience

The number of years for which the teachers had taught in the special class situation varied from one to twenty years. The summary table, Table 9 (p. 93) specifies the exact number of years for which each teacher had taught in a special class.

A total of thirteen teachers had taught in the special class for a period not exceeding ten years. Only two teachers, Teachers D





and M had more than ten years experience. Table 14 identifies teachers according to the approximate number of years for which they had taught in the special class situation.

Table 14  
Teachers Identified According to Approximate  
Number of Years of Special Class Experience

Approximate number of years	Teachers
0 - 4	C, F, I, J, K, N
5 - 9	A, B, E, G, H, L, O
10 - 14	
15 - 19	D
20 - 24	M

Altogether six teachers had less than four years special class experience. Of these six, three were completing their first year in a special class.

A total of seven teachers reported from five to nine years special class experience, while two reported experience exceeding ten years.

Generally the teachers had more regular grade experience than special class experience. Table 15 compares the approximate number of years for which the teachers taught in the regular grades, and in the special class. This table demonstrates that 60 per cent of the teacher population had ten or more years of regular grade experience



as opposed to the 13 per cent with ten or more years of special class experience.

Table 15  
Teachers Identified According to Approximate  
Number of Years of Regular Grade  
Experience and of Special  
Class Experience

Approximate number of years	Teachers identified according to regular grade and special class experience	
	Regular grades	Special class
0 - 4	F, H, I	C, F, I, J, K, N
5 - 9	B, G, L	A, B, E, G, H, L, O
10 - 14	A, E, N	
15 - 19	C, K	D
20 - 24	J, M, O	M
25 - 29	D	

Type of Special Class Experience

In addition to experience in Junior Opportunity classes the teachers reported experience in two other types of special class. Experience in a Senior Opportunity Class and in Adaptation Classes were both mentioned. Senior Opportunity Classes are classes for EMRs who are generally speaking, twelve or more years of age. Adaptation Classes are for "students of average ability who are academically handicapped through various learning disabilities." This definition was obtained from the office of the Director of Special Education for



the Edmonton Public School Board.

In all, eleven teachers reported their special class experience to be exclusively in Junior Opportunity Classes and concerned exclusively with the education of EMRs. Teachers H, K, M, and N reported other special class experience.

Teacher M, who had twenty years of special class experience, reported that eight of these had been in Senior Opportunity Classes. A further eight years had consisted of experience in Opportunity Classes but Junior, or Senior, was not specified. The last four years of special class experience had been in a Junior Opportunity Class. This teacher's entire special class experience was, therefore, concerned with the education of EMRs.

Teachers H, K, and N all reported experience in Adaptation Classes. Teacher H had five years of special class experience and one of these was in an Adaptation Class. Teacher K had two years of special class experience, the first of which had been with an Adaptation Class. Teacher N was completing her first year of special class experience. The first half of this year had been with an Adaptation Class and the second half with her present Junior Opportunity Class.

For the teachers reporting other special class experience two were completing their first year with a Junior Opportunity Class. Where teachers reported experience only in Junior Opportunity Classes again two were completing their first year. A total of four teachers were therefore concerned with the education of EMRs in Junior





Opportunity Classes for the first time.

When asked to state number of years for which they had taught in the special class the teachers were also asked to supply dates where possible. When these dates were examined they revealed a tendency on the part of these teachers to remain within the special class situation once they had entered it. In all, twelve teachers had more than one year of experience in the special class. Of these twelve teachers only Teacher O had returned to the regular grades, and then only for a period of one year, following which she returned to the special class situation. Two other teachers had left the special class situation and returned to it but were not teaching during their absence from the profession.

#### Other Experiences in the Educational Situation

Only two of the fifteen teachers noted other experiences in the educational situation. One teacher was currently holding an administrative position. The other teacher had held a position as a rural supervisor, and had assisted with teacher education programs. Both positions had been held at least fifteen years previously.

#### Summary

On the basis of the findings presented it is possible to make several statements concerning the professional experiences of these special class teachers. With respect to classroom experience per se, the majority of these teachers had more than ten years experience and were not just embarking upon their careers. Regular grade experience featured in the background of fourteen teachers and most of these



fourteen teachers had taught regular grades at the elementary level.

Special class experience did not exceed ten years for most of the teachers and special class experience was confined mainly to the Junior Opportunity Class. There was a trend among the teachers to remain in the special class setting once they had entered it.

One further observation can be made about these fifteen teachers. As a population they tended to remain in the classroom situation and had not generally held positions other than that of classroom teacher.



## Chapter 5

### FINDINGS: TEACHERS' ESTIMATES OF INSTRUCTIONAL LEVEL

This chapter will consist of two major sections. The first section will report the findings as they relate to the accuracy of the special class teachers' estimates concerning the instructional reading levels of their students.

The second section will report and discuss teacher practices and opinions solicited during the administration of The Informal Teacher Interview, and which in some instances contribute to an understanding of the teachers' estimates of instructional level.

#### TEACHERS' ESTIMATES OF INSTRUCTIONAL LEVEL

The major purpose of this study was to determine the accuracy of teachers' estimates concerning the instructional reading levels of EMRs in Junior Opportunity Classes.

As stated previously, the accuracy of each of the fifteen teachers, as estimators, was determined by the scores their five students made on the Smith IRI. A student meeting the criteria for instructional level on the Smith IRI was designated as reading at instructional level in the instructional materials assigned by the teacher, and the teacher was credited with having made an accurate estimate.

Teachers credited with four or five accurate estimates were





designated as accurate estimators.

To determine the accuracy of teachers' estimates concerning the instructional reading levels of their students, the three scores obtained by each student on the Smith IRI were examined in conjunction with each other. The three scores made by each student are reported in Table 16. Scores for word recognition, literal comprehension and interpretive comprehension are presented and students are identified according to their teacher.

A total of seven students met the full criteria and were designated as reading at instructional level. The remaining sixty-eight students failed to meet one or more of the criterion established for word recognition, literal comprehension and interpretive comprehension. The seven students who read at instructional level are identified in Table 16 as students A<sub>1</sub>, C<sub>3</sub>, F<sub>3</sub>, H<sub>2</sub>, I<sub>2</sub>, J<sub>2</sub>, and N<sub>3</sub>.

This finding reveals that while 9 per cent of the students read selections at their instructional level, 91 per cent read selections that were too difficult.

The seven students reading at instructional level were the students of seven different teachers. No teacher, therefore, could be designated as an accurate estimator. The seven teachers making one accurate estimate were Teachers A, C, F, H, I, J, and N.

The major finding of this study was that special class teachers of EMRs enrolled in Junior Opportunity Classes, are not accurate estimators of the instructional reading levels of their students.

Given this finding a question was asked as to how accurate



Table 16

Student Scores on the Smith IRI with Student  
Identified According to Teacher\*

Teacher	Student	Smith IRI scores			Teacher	Student	Smith IRI scores			Teacher	Student	Smith IRI scores		
		Word rec.	Lit. comp.	Int. comp.			Word rec.	Lit. comp.	Int. comp.			Word rec.	Lit. comp.	Int. comp.
A	1	93	85	75	F	1	96	60	80	K	1	69	35	20
	2	92	50	0		2	83	65	70		2	89	25	35
	3	97	0	10		3	93	90	70		3	93	55	50
	4	76	30	35		4	79	45	70		**4	97	45	15
	5	80	35	15		5	88	80	65		**5	94	35	25
B	1	95	40	10	G	1	95	90	65	L	1	64	30	40
	2	80	55	55		2	42	0	0		2	93	75	10
	3	95	55	35		3	71	10	5		3	77	35	90
	4	63	10	10		4	88	75	40		4	90	60	60
	5	96	50	25		**5	83	35	0		5	98	65	30
C	1	66	10	10	H	1	90	90	55	M	1	97	15	30
	2	76	60	55		2	94	100	85		2	92	20	35
	3	94	85	80		3	90	80	40		3	91	80	70
	4	86	45	25		4	96	80	40		4	94	85	25
	5	87	50	35		5	88	40	20		5	98	60	30
D	1	76	10	10	I	1	94	35	55	N	1	78	50	30
	2	93	35	0		2	85	100	95		2	97	80	45
	3	88	45	10		3	84	30	10		**3	98	90	95
	4	66	35	85		4	95	55	40		4	81	75	40
	5	96	50	20		5	81	70	25		5	90	100	40
E	1	97	85	65	J	1	85	85	60	O	1	94	30	50
	2	83	90	40		2	94	100	70		2	95	80	65
	3	90	55	35		3	97	10	0		3	92	75	70
	4	76	5	0		4	90	40	20		4	90	80	65
	5	99	80	35		5	90	95	50		5	98	65	50

\*Expressed as per cent accuracy for word recognition, literal comprehension, and interpretive comprehension.

\*\*Students reading above grade three level. Word recognition criterion = 95 per cent accuracy.



the teachers were in estimating instructional level when word recognition, literal comprehension, and interpretive comprehension were considered separately. The findings with respect to teachers' estimates for (1) word recognition, (2) literal comprehension, and (3) interpretive comprehension are now presented.

#### Teachers' Estimates for Word Recognition

To determine the accuracy of teachers' estimates for word recognition, the word recognition scores of the seventy-five students were examined. This examination showed that fifty-nine students met the criterion (80 +, or 95 + per cent accuracy). Thus 79 per cent of the students were reading at instructional level for word recognition while 21 per cent were not.

When the students meeting the criterion for word recognition were considered with their teachers, it was apparent that ten of the teachers could be designated as accurate estimators for word recognition. It was possible for a teacher to be credited with no accurate estimates (0), or with any number of accurate estimates up to five. Table 17 identifies each teacher according to the number of accurate estimates each made.

A total of five teachers made five accurate estimates for word recognition, and five teachers made four accurate estimates. These ten teachers represented approximately 67 per cent of the teacher population. The remaining five teachers could not be designated as accurate estimators for word recognition, although four of these five teachers each made three accurate estimates. Only one teacher made





Table 17  
Teachers Identified According to  
Number of Accurate Estimates  
for Word Recognition

No. of accurate estimates	Teachers identified
0	
1	
2	G
3	C, D, K, L
4	A, B, E, F, N
5	H, I, J, M, O

less than three accurate estimates.

The findings presented thus far indicate that a difference exists between the accuracy of the teachers' estimates of instructional level per se and their estimates of instructional level for word recognition. This difference is evidenced by the number of accurate estimates made by the fifteen teachers (seven for instructional level as opposed to fifty-nine for word recognition), and by the number of accurate estimators among the teachers (none for instructional level as opposed to ten for word recognition). This observed difference points to the two comprehension aspects of instructional level as an explanation for the discrepancy. The findings with respect to teachers' estimates for literal comprehension are presented first.



### Teachers' Estimates for Literal Comprehension

To determine the accuracy of teachers' estimates for literal comprehension, the literal comprehension scores of the seventy-five students were examined. This examination revealed that fifteen students met the criterion (85 + per cent accuracy). In other words, 20 per cent of the students were reading at instructional level for literal comprehension, whereas 80 per cent were not.

The fifteen students meeting the criterion for literal comprehension also met the criterion for word recognition. However, forty-four or 75 per cent of the fifty-nine students who met the criterion for word recognition failed to meet the criterion for literal comprehension.

With respect to literal comprehension there was no teacher who could be designated as an accurate estimator. The highest number of accurate estimates made by any one teacher was three. Table 18 identifies the teachers according to the number of accurate estimates each made for literal comprehension.

As indicated in Table 18, five teachers made no accurate estimates for literal comprehension. Six teachers made one accurate estimate each, and three teachers made two accurate estimates each. Only one teacher made three accurate estimates and that was the highest number of accurate estimates for literal comprehension among the teachers.



Table 18  
Teachers Identified According to  
Number of Accurate Estimates  
for Literal Comprehension

No. of accurate estimates	Teachers identified
0	B, D, K, L, O
1	A, C, F, G, I, M
2	E, H, N
3	J
4	
5	

In each instance where a teacher made an accurate estimate for the literal comprehension aspect of instructional level that teacher also made an accurate estimate for the word recognition aspect of instructional level. The ten teachers who made accurate estimates for literal comprehension did, in fact, make accurate estimates of instructional level for both word recognition and literal comprehension. In this respect Teacher J stands out as the only teacher to make three accurate estimates for word recognition and literal comprehension combined. It is interesting that Teacher J was also the teacher who organized reading instruction in conjunction with a Primary Opportunity Class teacher located in the same school. These two teachers organized reading groups that drew together students from their two classes who exhibited similar levels of reading ability.





Each of these two teachers planned the reading program for a number of the reading groups but not all the reading groups. It is possible that this arrangement may have produced positive results for Teacher J, and indeed for the students receiving instruction. Teacher J did not differ from the other fourteen teachers in respect to any of the professional characteristics identified in this study.

The findings indicate that as a group the teacher made more accurate estimates for word recognition than for literal comprehension. The range of accurate estimates made by the teachers for word recognition varied from two to five accurate estimates. For literal comprehension, the range varied from no accurate estimates to three. Table 19 compares the number of accurate estimates made by each teacher for both word recognition and literal comprehension.

The findings presented in Table 19 show that while a teacher may make accurate estimates of instructional level for word recognition this is no guarantee that this accuracy will transfer to estimates for literal comprehension. For example, of those five teachers who made no accurate estimates for literal comprehension, three had made two accurate estimates for word recognition, one had made four, and one had made five. It is also evident from the data in Table 19 that no teacher made more accurate estimates for literal comprehension than for word recognition. The findings relating to teachers' estimates for interpretive comprehension are now reported.



Table 19

A Comparison of the Number of Accurate  
Estimates Made by Each Teacher  
for Word Recognition and  
Literal Comprehension

Teacher	No. of accurate estimates for word recognition	literal comprehension
A	4	1
B	4	0
C	3	1
D	3	0
E	4	2
F	4	1
G	2	1
H	5	2
I	5	1
J	5	3
K	3	0
L	3	0
M	5	1
N	4	2
O	5	0
15	59	15



### Teachers' Estimates for Interpretive Comprehension

It has been noted that whereas fifty-nine students met the criterion for word recognition, only fifteen students met the criterion for word recognition and literal comprehension combined. When the third criterion for interpretive comprehension was considered in conjunction with word recognition and literal comprehension, only seven students were reading at instructional level. This finding was, of course, stated at the beginning of this section and was basic to the finding that no teacher could be designated as an accurate estimator of instructional level.

To determine the accuracy of teachers' estimates for interpretive comprehension separately, the interpretive comprehension scores of the seventy-five students were examined. This examination revealed that fourteen students met the criterion (70 + per cent accuracy) for interpretive comprehension. In short, 19 per cent of the students were reading at instructional level for interpretive comprehension while 81 per cent were not.

The total number of accurate estimates made by the fifteen teachers was fourteen. Table 20 identifies the teachers according to the number of accurate estimates each made for interpretive comprehension. While four teachers made no accurate estimates for interpretive comprehension, ten teachers each made one accurate estimate. Only one teacher made more than one accurate estimate. This teacher, Teacher F, made four accurate estimates and was the only accurate estimator for interpretive comprehension.





Table 20

Teachers Identified According to  
Number of Accurate Estimates for  
Interpretive Comprehension

No. of accurate estimates	Teachers identified
0	B, E, G, K
1	A, C, D, H, I, J, L, M, N, O
2	
3	
4	F
5	

The number of accurate estimates made for interpretive comprehension was fourteen and, therefore, closely paralleled the number made for literal comprehension which was fifteen. However, the teachers who made accurate estimates for interpretive comprehension were not necessarily those who made accurate estimates for literal comprehension. Table 21 compares the number of accurate estimates made by each teacher for both literal and interpretive comprehension. Table 21 also reports the number of accurate estimates made by each teacher for word recognition.

Of the fifteen teachers, six made the same number of accurate estimates for both literal and interpretive comprehension. Four teachers made a greater number of accurate estimates for interpretive



Table 21

A Comparison of the Number of Accurate Estimates  
Made by Each Teacher for Word Recognition,  
Literal Comprehension and Interpretive  
Comprehension

Teacher	No. of accurate estimates for		
	word recognition	literal comprehension	interpretive comprehension
A	4	1	1
B	4	0	0
C	3	1	1
D	3	0	1
E	4	2	0
F	4	1	4
G	2	1	0
H	5	2	1
I	5	1	1
J	5	3	1
K	3	0	0
L	3	0	1
M	5	1	1
N	4	2	1
O	5	0	1
15	59	15	14



comprehension while five made a greater number for literal comprehension. The difference in the number of accurate estimates made by each teacher was limited. That is, for twelve of the fifteen teachers the number of accurate estimates made for literal comprehension, and the number made for interpretive comprehension, either remained the same, or changed by only one accurate estimate. The estimates made by two teachers changed by two accurate estimates. A change of four accurate estimates is reported for Teacher F, who somewhat paradoxically made no accurate estimates for literal comprehension, but four for interpretive comprehension.

Further examination of Table 21 reveals that Teacher F made the same number of accurate estimates for both word recognition and interpretive comprehension. While no teacher was designated as an accurate estimator for all three aspects of instructional level, Teacher F was the one teacher who could be designated as an accurate estimator for two aspects, those two being word recognition and interpretive comprehension.

The findings presented to date have indicated that the teachers, as a group, were equally accurate in their estimates of instructional level for both literal and interpretive comprehension. However, further examination of the students' per cent accuracy scores revealed that a greater percentage of students made higher scores for literal comprehension than for interpretive comprehension. This difference was made obvious when the students' scores were considered in relation to the figure of 50 per cent accuracy. The





50 per cent accuracy score was selected as the basis for the comparison because it represents the score, below which, frustration level reading is indicated for the comprehension aspects of reading.

Students per cent accuracy scores for both literal and interpretive comprehension were reported in Table 16 (p.107). For literal comprehension, thirty students scored less than 50 per cent and forty-five students scored 50 per cent or better. For interpretive comprehension, forty-six students scored less than 50 per cent, while only twenty-nine students scored 50 per cent or better. In other words, students were better able to handle the literal comprehension questions compared with the interpretive comprehension questions. In relating these findings back to the teachers, it may be said that the teachers' estimates of instructional level for literal comprehension, though not always accurate, were more accurate than their estimates of instructional level for interpretive comprehension.

The finding that a number of students scored less than 50 per cent accuracy on the Smith IRI for both comprehension aspects of instructional level raises the question of frustration level placement in instructional materials. The findings with respect to frustration level will be the subject of the next section.

#### Frustration Level Reading

The findings just reported showed that thirty students made scores approximating frustration level for literal comprehension, while forty-six made scores approximating this level for interpretive



comprehension. Frustration level for word recognition is indicated by a score which is below 80 per cent accuracy (instructional level for word recognition). A total of sixteen students were reading at frustration level for word recognition (Table 16, p. 107).

Table 22 reports the number of students in each teacher's class who made scores approximating frustration level for word recognition, literal comprehension and interpretive comprehension. These data show the tendency of most teachers to assign instructional materials at frustration level less often for word recognition than for literal comprehension, and less often for literal comprehension than for interpretive comprehension. This finding was more clearly demonstrated when the number indicating students at frustration level was converted to a percentage score. In Table 23 each teacher is identified according to the percentage of students, from her class, who scored at frustration level for word recognition, literal comprehension, and/or interpretive comprehension.

When frustration level for word recognition was examined it was found that ten of the fifteen teachers had no more than 20 per cent of their students at frustration level. This was true of only five teachers where literal comprehension was concerned, and only two teachers where interpretive comprehension was concerned. Furthermore while only one of the fifteen teachers had more than 40 per cent of her students at frustration level for word recognition, four teachers had more than 40 per cent at frustration level for literal comprehension. The number of teachers with more than 40 per cent of



Table 22

Number of Students in Each Teacher's Class  
Scoring at Frustration Level for Word  
Recognition, Literal Comprehension  
and Interpretive Comprehension

Teacher	No. of students at frustration level for		
	word recognition	literal comprehension	interpretive comprehension
A	1	3	4
B	1	2	4
C	2	2	3
D	2	4	4
E	1	1	4
F	1	1	0
G	3	3	4
H	0	1	3
I	0	2	3
J	0	2	2
K	2	4	4
L	2	2	3
M	0	2	4
N	1	0	4
O	0	1	0
15	16	30	46





Table 23

Teachers Identified According to the Percentage  
of Students at Frustration Level for Word  
Recognition, Literal Comprehension  
and Interpretive Comprehension

Aspect of instructional level	Teachers identified by percentage of students at frustration level					
	0%	20%	40%	60%	80%	100%
Word recognition	H, I, J, M, O,	A, B, E, F, N,	C, D, K, L	G		
Literal comprehension	N	E, F, H, O,	B, C, I, J, L, M,	A, G,	D, K,	
Interpretive comprehension	F, O,		J,	C, H, I, L,	A, B, D, E, G, K, M, N,	

their students at frustration level increased to twelve when interpretive comprehension was considered. In short, the degree to which the fifteen teachers placed students at frustration level was greater for interpretive comprehension than for literal comprehension, and greater for literal comprehension than for word recognition.

In considering the degree to which teachers placed students at frustration level, two teachers were identified as having placed a smaller percentage of their students at frustration level when compared to the remaining thirteen teachers. These teachers are identified in Table 23 as Teachers F and O. These two teachers had no students at frustration level for interpretive comprehension (the



remaining thirteen teachers had 2 or more), and only one student at frustration level for literal comprehension. Teacher F had one student at frustration level for word recognition while Teacher O had none.

An examination of the professional characteristics of these two teachers revealed that both had, within the last ten years, acquired formal course work in remedial reading techniques. Although five other teachers reported course work in reading, none specified the course content as remedial reading. (Two teachers did not report the content of their course work in reading.) Therefore, this professional characteristic, a course related to remedial reading, appeared to distinguish Teachers F and O from their colleagues.

#### Informal Finding

Following the administration of the Smith IRI each student was asked to read a short selection from the instructional materials assigned to him by his teacher. Usually a student read from 100 to 250 words, although less than 100 words were read by some students, particularly those with materials at the grade one level. The selection was taken from the story which followed the story reached in the previous reading lesson. The selection read by the student was scored for word recognition errors, but no comprehension check was made since the researcher did not know prior to the session which story the student had reached in his previous lesson and therefore did not know from which story the student would read. Comprehension questions, under these conditions, would have had to be formulated spontaneously



by the investigator. Since approximately seventy-five different selections were involved, there could be no guarantee that questions formulated in these circumstances would be consistently similar from a qualitative point of view, and for that reason, none were asked.

To all intents, this informal procedure was initiated to permit the investigator to consider further the suitability of the Smith IRI selection assigned the student. It was thought that a noticeable discrepancy between a student's word recognition score on the Smith IRI selection and his score in the instructional materials would have indicated that the Smith IRI word recognition score might not constitute a reliable measure of the teacher's estimate of instructional level.

In the light of these comments, and because this procedure came at the end of the session, when the student may have been tired, the findings presented here should be interpreted with caution. They are not considered to represent a legitimate finding but are provided because of the interest they raise.

Table 24 compares the word recognition scores obtained by each student for the selection read from the instructional materials assigned by the teacher and the Smith IRI selection. Students are identified according to teacher.

As stated previously, fifty-nine students (79 per cent) met the criterion for word recognition on the Smith IRI selection. A total of sixty-two students (83 per cent) met the criterion in their instructional materials.





Table 24

Students' Scores for Word Recognition According to the  
Smith IRI and Instructional Materials Selection

Teacher	Student	Word rec.scores		Teacher	Student	Word rec.scores		Teacher	Student	Word rec.scores	
		Instruc- tional materials	<u>Smith</u> <u>IRI</u>			Instruc- tional materials	<u>Smith</u> <u>IRI</u>			Instruc- tional materials	<u>Smith</u> <u>IRI</u>
A	1	93	93	F	1	97	96	K	1	79	69
	2	90	92		2	92	83		2	87	89
	3	94	97		3	92	93		3	80	93
	4	92	76		4	82	79		*4	95	97
	5	79	80		5	88	88		*5	89	94
B	1	95	95	G	1	90	95	L	1	73	64
	2	86	80		2	60	42		2	90	93
	3	97	95		3	63	71		3	77	77
	4	70	63		4	95	88		4	97	90
	5	93	96		*5	78	83		5	100	98
C	1	72	66	H	1	94	90	M	1	100	97
	2	83	76		2	93	94		2	91	92
	3	95	94		3	91	90		3	93	91
	4	91	86		4	95	96		4	91	94
	5	76	87		5	92	88		5	98	98
D	1	81	76	I	1	88	94	N	1	89	78
	2	95	93		2	87	85		2	95	97
	3	89	88		3	85	84		*3	99	98
	4	59	66		4	96	95		4	90	81
	5	94	96		5	79	81		5	94	90
E	1	95	97	J	1	85	85	O	1	96	94
	2	80	83		2	91	94		2	89	75
	3	91	90		3	98	97		3	83	92
	4	89	76		4	88	90		4	96	90
	5	97	99		5	85	90		5	100	98

\* Students reading above grade three level. Word recognition criterion = 95 per cent accuracy.



Of the seventy-five students, fifty-six met the instructional level criterion for word recognition in both the selection from their instructional materials and the selection from the Smith IRI. Ten students failed to meet the criterion in either selection. In total, sixty-six students demonstrated a similar word recognition performance in both selections in as far as either meeting, or failing to meet, the criterion for instructional level. Of the nine remaining students, six met the criterion for word recognition in their instructional materials but not on the Smith IRI: three met the criterion on the Smith IRI but not in their instructional materials.

The number of accurate estimates made by each teacher for the word recognition aspects of the two selections were very similar. Table 25 which reports the number of accurate estimates made by each teacher for both the instructional material selections and the Smith IRI selections shows that ten of the fifteen teachers were credited with the same number of accurate estimates for both selections. Four teachers each made one more accurate estimate for the instructional materials selection, while one teacher made one less accurate estimate. The number of accurate estimators was ten according to the Smith IRI and eleven according to the instructional materials.

These data would seem to support the previous finding that at least two thirds of the teachers were accurate estimators for the word recognition aspect of instructional level. To a certain extent these informal findings might lend support also to the assumption that students performance in the Smith IRI would reflect his performance in



Table 25

Number of Accurate Estimates Made by Each Teacher  
According to Their Students' Word Recognition  
Score on the Smith IRI and the  
Instructional Materials

Teacher	No. of accurate estimates according to <u>Smith IRI</u>	according to instructional materials
A	4	4
B	4	4
C	3	3
D	3	4
E	4	5
F	4	5
G	2	2
H	5	5
I	5	4
J	5	5
K	3	3
L	3	3
M	5	5
N	4	5
O	5	5





the instructional materials assigned by the teacher, at least for word recognition. Finally these similar word recognition scores could be interpreted as support for the matching of materials, with respect to level of difficulty, through the application of the Spache and the Dale-Chall readability formulas.

### Summary

When the Smith IRI student scores were examined to determine the accuracy of the teachers' estimates of instructional level a number of findings emerged.

As a group, and as individuals, the fifteen teachers were not accurate estimators of the instructional reading levels of their students. While ten teachers were accurate estimators for the word recognition aspect of instructional level, there were no accurate estimators when the word recognition and literal comprehension aspects of instructional level were considered jointly. Ten of the fifteen teachers made accurate estimates when these two aspects were considered, but only one of these teachers, Teacher J, made as many as three accurate estimates.

When the three aspects of instructional level were considered in conjunction with each other seven teachers had each accurately estimated the instructional level of one student.

Only one teacher was designated as an accurate estimator for more than one aspect of instructional level. Teacher F accurately estimated the instructional level of four students for both word recognition and interpretive comprehension.



The student scores demonstrated that the teachers made estimates approximating frustration level for all three aspects of instructional level. Five teachers had 40 per cent or more of their students at frustration level for word recognition. Ten teachers had 40 per cent or more of their students at frustration level for literal comprehension, and thirteen teachers had 40 per cent or more of their students at frustration level for interpretive comprehension.

Teachers F and O were identified as two teachers who had no more than 20 per cent of their students at frustration level when all three aspects of instructional level were considered.

#### THE SPECIAL CLASS TEACHER: PRACTICES AND OPINIONS

The findings presented in this section are those which resulted from the analysis of the data obtained through The Informal Teacher Interview (Appendix B). During the The Informal Teacher Interview teachers were required to answer the questions posed, spontaneously, without the opportunity to consider and qualify answers which a questionnaire, completed at leisure, affords. These findings, therefore, should be interpreted as indications of instructional practices and opinions and not as established facts.

The findings are presented in seven sections and these sections parallel the order in which the questions were asked. The presentation of the findings are preceded in each section by a restating of the question.

The sections are presented in the following order as they



relate to comments concerning:

1. Procedures for assigning instructional materials
2. Organization for reading instruction
3. Emphasis in instructional program
4. Perceived reading needs
5. Professional organizations and journals
6. Organizational changes in special classes
7. Pre-requisite experience for special class.

#### Procedures for Assigning Instructional Materials

How do you decide which instructional reader you will assign to a student?

What information or procedures do you use?

Responses to this question indicated that two sources of information, or two general procedures, were utilized by the fifteen teachers. One source consisted of the information contained in the cumulative records of the students, while the second was the reading performance of the students in instructional materials at various levels of difficulty.

When consulting students' cumulative records the teachers reported attending to the following items:

1. The results of diagnostic reading tests administered by visiting reading specialists.
2. The comments of other teachers concerning the reading performance of a student and the instructional materials used by the student in previous classes.
3. The results of standardized tests, especially the





Stanford Achievement Test, administered by teachers.

Of the fifteen teachers, thirteen indicated they used the cumulative records as a source of information when assigning instructional materials, though not every teacher used every item listed. All fifteen teachers reported that they used a student's reading performance in instructional materials as a source of information. Furthermore, the teachers stated that the student's actual reading performance constituted the final criterion for the assignation of instructional materials. Table 26 identifies the cumulative record items used by each teacher. The data demonstrate that all teachers cited the reading performance of the student as a source of information.

A total of three teachers reported using the results of diagnostic reading tests, while eight reported using the results of standardized tests. The comments and reports of other teachers were used by eleven teachers. Table 26 also demonstrates that three teachers used all three items stipulated, three used two items, and seven used one. Two teachers did not use any items from the cumulative records. Moreover, Teacher N had not assigned the instructional materials her students were presently using since she had taken over the class in the middle of the year. She did indicate that she would use the reading performance of the students to assign instructional materials. Teacher N had not changed the materials assigned by the previous teacher because she felt they were appropriate.



Table 26

Teachers' Use of Cumulative Record Items and  
Instructional Materials When Assigning  
Instructional Materials to Students

Teacher	Cumulative Record Items			Instructional materials
	Diagnostic reading tests	Standardized reading tests	Other teachers' comments	
A		X	X	X
B			X	X
C	X	X	X	X
D	X	X	X	X
E		X		X
F			X	X
G			X	X
H		X	X	X
I				X
J	X	X	X	X
K		X	X	X
L			X	X
M		X		X
N				X
O			X	X

<sup>X</sup>Item indicated by teacher.



One further point was made by eleven of the fifteen teachers. These eleven indicated that the instructional materials which they originally assigned were subject to change. They remarked that if the student's performance in the instructional materials, after a period of time indicated that the materials were inappropriate, they would change the materials.

Generally the teachers used both items from the cumulative records of their students and the reading performance of students to assign instructional materials. The final decision for assigning materials was based upon the reading performance of the students. Initial decisions concerning instructional materials were not irreversible.

The practice of assigning instructional materials according to a student's reading performance is similar to the procedure of administering an IRI. No teacher, however, mentioned the application of specific criteria for either word recognition or comprehension.

The major findings of this study indicated that many students were reading instructional materials which were inappropriate. This finding would seem to conflict with the comments of the teachers concerning changes of inappropriate instructional materials. Furthermore since the teachers did not indicate the use of specific criteria, the question is raised as to whether they used criteria, and if so, what this criteria might be?





### Organization for Reading Instruction

Do you group your students for reading instruction and if so how many reading groups do you have at this time?

In response to this question thirteen teachers indicated that they grouped for reading instruction, while two reported they were using an individualized approach.

The individualized approach. The teachers using the individualized approach to reading instruction were Teachers G and I. Both teachers volunteered reasons for individualizing reading instruction.

Teacher I said that she did, in fact, have one reading group of three or four children operating in her class, but she felt the majority of her students were not ready to participate in a group reading situation. She said they were not confident in the oral reading situation and consequently they tended to laugh at each others mistakes. Teacher I was using one basal reading series in her instructional program. She was one of the two teachers who did not report using the cumulative records to assign instructional materials.

Teacher G said she had individualized her reading program because she felt it would more effectively accommodate the range of reading ability among her students. She felt that grouping for instruction was, in fact, more effective but she had realized this too late in the school year to change her strategy. She was aware that several of her students were reading from instructional materials which were too difficult but remarked that a competitive spirit among some of the children prompted them to choose materials which were too



difficult.

Group instruction. Where teachers used group instruction the number of groups varied from four to six. Table 27 identifies the teachers who grouped for reading according to the number of reading groups in their classrooms.

Table 27  
Teachers Identified According to Number  
of Reading Groups Indicated

No. of groups	Teacher
6	E
5	A, F, L, O
4	B, C, H, J, D, K, M, N

Only one teacher was operating with six reading groups, while four teachers had five groups. More than one-half of the teachers, eight to be exact, had organized four reading groups.

Comments were made by three of the teachers which indicated that the reading ability of the students was not the only factor which influenced the number of groups they formed. One teacher stated that she limited the number of groups in order that she could hear her students read more often. Another teacher said that it was better to have a group of two children rather than a child reading alone. The child reading alone was not provided with the challenge which reading with other students presented. A third teacher commented that some





of her students should be assigned more difficult instructional materials but this was not practical since she was already operating the number of groups she could adequately manage.

These remarks of these three teachers, although limited in number, and in what they reveal, perhaps imply that students may be assigned inappropriate materials in order to conform to the organizational abilities of a teacher, or a specific belief about the child in the reading situation. Where a teacher believes that children read more effectively in a group situation then it is possible that a child may be assigned inappropriate materials in order that he can function as a member of a group. Where a teacher feels that she can only effectively instruct a certain number of groups, then her students must be assigned to one of these groups, even if instructional materials are inappropriate with respect to level of difficulty. It is possible to conjecture that a teacher could, in such circumstances as these, be aware that a student is not reading at instructional level, but continues instruction in the materials.

Furthermore the comments made by these three teachers would appear to conflict with the contention of all fifteen teachers that the criteria for the assignation of instructional material was the reading performance of the students.

#### Emphasis in Instructional Program

In teaching your students to read are there any aspects of this process that you particularly emphasize?

Responses by the teachers to this question were identical.

A total of fourteen teachers replied that they emphasized both word





recognition and comprehension, while one teacher mentioned word recognition only. Nine of the fourteen teachers who stated both word recognition and comprehension, mentioned word recognition first, while five mentioned comprehension and then word recognition. Generally teachers did not add further comments in relation to the comprehension aspect of reading beyond indicating that it was important. They tended to speak of word recognition, however, in more definite terms. It was referred to as the "fundamental skill" or the "basic tool" and the necessity for emphasis in this area was noted by almost every teacher.

One teacher did express the opinion that the comprehension aspect of reading should not be emphasized at the lower grade levels. Another teacher, although admitting to a teaching emphasis toward both comprehension and word recognition, felt that much greater stress should be placed on word recognition. In this teacher's opinion, EMRs were not capable of obtaining meaning from the printed page.

The comments of the teachers with respect to word recognition and comprehension would seem to suggest a greater awareness on their part of the word recognition aspects of reading. This observation is perhaps particularly pertinent when it is considered in conjunction with the finding that teachers assigned instructional materials which approximate their students' instructional level for word recognition more often than they approximate instructional level for comprehension. Certainly the comments of the teachers and the findings with respect to word recognition are not contradictory.



### Perceived Reading Needs of Teachers

If you were to take a course related to the teaching of reading, what course content would be most helpful to you at the present time? In other words are there any areas in which you feel a need for further knowledge?

A total of fourteen teachers responded to this question and seven areas were identified by the teachers as areas in which they felt a need for further knowledge. Table 28 reports the area specified by each teacher. Each area identified is now discussed separately.

Cause of reading problems. A total of four teachers indicated that they were interested in knowing more about the various causes of reading problems. Knowledge of the physical causes of reading problems were stressed by two of the teachers, and one of these teachers was particularly interested in gaining more information concerning the effects of brain damage on the reading performance and achievement of EMRs. During the conversation no teacher mentioned specific implications that this knowledge would have for the teaching of reading, but all four expressed the view that such knowledge would be helpful.

Methods of teaching reading. The need for information concerning the various approaches for teaching reading was expressed by four teachers. Generally these teachers felt that a combination of different approaches might be more effective with EMRs and that there was no one approach which would work for all children.

Reading materials. Six teachers felt that they needed to



Table 28  
Perceived Reading Needs as Identified  
by Each Teacher

Area of Need						
Cause of reading problems	Methods of teaching reading	Reading Materials	Phonics	Reading tests	Reading process	Social function of reading
A						
B	X					
C		X				
D			X			
E		X		X		
F	X	X	X			
G		X				
H	X		X			
I				X		
J	X					
K			X	X		
L					X	
M						X
N		X	X			
O			X			

X Area indicated by teacher.





know more about the various kinds of reading materials available. Two teachers, Teachers H and N, specifically mentioned a need for information concerning instructional reading materials for EMRs. They were interested in knowing particularly about materials which were of high interest but low vocabulary. One teacher, Teacher O, specified her need for a course in reading which was concerned with analyzing the strengths and weaknesses of various instructional readers. She felt that this knowledge would provide her with a more effective basis for choosing materials for classroom use.

Phonics. The need for more knowledge about the teaching of phonics was expressed by three teachers. These teachers did not expand upon this need beyond saying that they needed more knowledge in the techniques involved in teaching phonics.

Reading tests. The three teachers who expressed a need for more information about reading tests stated that they were familiar with the names of the tests used by reading specialists involved in the testing of their students. They added, however, that they did not know enough about the tests to interpret, as well as they would like to, the findings.

Reading process. The one teacher who expressed a need for more information concerned with the reading process stated that she was not sure what happened when an individual read from the printed page. She generally felt that it was a complicated process and needed to know what factors were involved.

Social function of reading. The one teacher who expressed a



need for added knowledge in this area was interested in the part that reading would play in the lives of EMRs outside the classroom. She felt the child was taught to read so that he could "operate more successfully in the social environment." She believed that knowledge of the reading skills EMRs would require in the social environment would give more direction to her teaching of this subject.

In summary, fourteen of the fifteen teachers perceived a need for additional knowledge in one or more areas related to the teaching of reading. The areas identified by the teachers varied from needs as specific as techniques for teaching phonics to a need for viewing reading in its social context.

#### Professional Organizations and Journals

Do you belong to any professional organizations or subscribe, personally, to any professional journals?

With the exception of compulsory membership in The Alberta Teachers' Association, the fifteen teachers did not generally belong to professional organizations, or subscribe to professional journals. Three teachers held current membership in professional organizations while one subscribed to a journal.

The three teachers who reported membership in professional organizations were Teachers D, E, and L. All three teachers were members of the International Reading Association (IRA). In addition Teachers D and E were members of the Council for Exceptional Children (CEC). Several teachers indicated that they sometimes attended IRA meetings and four teachers stated that they had once been members of CEC.





The one teacher who reported a personal subscription to a professional journal was Teacher E. She was a member of the CEC and subscribed to its official publication: Exceptional Children.

Several teachers said they read journals to which the school subscribed. Three teachers said they often read The Instructor and two mentioned The Grade Teacher.

### Organizational Changes in Special Classes

Would you like to see any changes in the organization of special classes and if so what are these changes?

Although in responding to this question teachers were free to indicate any changes they felt would be beneficial, their responses were confined to four areas. Concern was expressed with respect to integration, segregation, the wide ability range of the students, and pupil-teacher ratio. Each concern is discussed separately. Table 29 summarizes the areas of change indicated by each of twelve teachers. Three teachers stipulated that they were satisfied with present organizational features.

Integration. Four teachers expressed concern with respect to integration of special class students in the regular grades. Generally these teachers felt that EMRs in special classes should participate in regular grade activities where possible. They felt that integration in areas such as music and physical education presented opportunities for students to participate in activities in keeping with their chronological age and to interact with regular grade peers. They maintained that the age range within their classes made it





Table 29  
Special Class Organizational Changes  
Indicated by Each Teacher

Teachers	Areas of change			
	Integration	Segregation	Ability range	Pupil-teacher ratio
A	X		X	
B	X			
C	X	X		
D			X	X
E			X	
F			X	X
H	X	X	X	
J			X	
L		X		
M		X		
N		X		
O			X	X
G ]	no change specified			
] ]				
K ]				
] ]				
I ]				

X Area indicated by teacher.



difficult to program activities in areas such as physical education, which were appropriate for all their students.

Segregation. Although the five teachers expressing concern in this area were themselves special class teachers, they questioned the concept of special class placement and the resultant segregation of EMRs from average and brighter peers and from neighbourhood friends during school hours. No solutions were specifically advocated by these teachers but there was the suggestion that regular grade placement accompanied by daily visits to a teacher, who would work to correct specific difficulties, might be a more educationally desirable situation.

Ability range. A total of seven teachers expressed concern over the wide range of ability among their students. These teachers observed that teaching students with such varied abilities presented too many organizational and instructional difficulties. They remarked that this was particularly true of the reading situation. One of these seven teachers indicated that she presently had four reading groups operating in her class while three would be preferable.

Two teachers suggested that in schools where more than one special class was operating, a partial solution to the problem might be available. In such circumstances the teachers could organize reading instruction as a team and perhaps reduce the range of reading ability with which each teacher must deal. Two other teachers suggested that more attention be given to the initial placement of a child in a special class. A student could perhaps be placed in a



class which included students with ability levels similar to his own. One of these teachers noted that the placement of students in classes according to ability would present a transportation problem.

Pupil-teacher ratio. Three teachers stated that their present enrolment was too high. Two of these teachers suggested a maximum of twelve students, while one teacher indicated that eight to ten students would be sufficient. The three teachers concerned with enrolment were also concerned about the wide ability range among EMRs in their classes. It is possible that concern for smaller enrolment is a reflection of the concern for ability range.

The areas for change in special class organization reflect a concern on the part of teachers for their students. Concern for students is demonstrated particularly by the teachers' comments concerning integration and segregation. The teachers, however, also express some concern for themselves. Those teachers who felt that the ability range in a class should be reduced were concerned with the benefits that such a change would bring them. Planning instruction for a more homogeneous group of EMRs would reduce some difficulties for the teachers. Certainly preparing instructional programs for children who vary in their ability takes considerable time and effort both in and out of school. However, the fact cannot be overlooked that in stressing the need for such a change the teachers may also be expressing a concern for the instructional needs of their pupils which might be more adequately met where the students were more homogeneous in their abilities.





It is pertinent to note at this point that the findings with respect to the estimates of instructional level made by the teachers indicated that teachers did experience difficulties in adjusting instructional materials.

#### Pre-requisite Experience for Special Class

Are there any professional experiences or aspects of university preparation which you feel constitute essential pre-requisites for teaching in the Junior Opportunity Class?

With the exception of one teacher, all the teachers expressed the opinion that experience in the regular grades should precede experience in the Junior Opportunity Class. Experience with grades one, two and three was cited as particularly valuable by seven teachers, since teaching techniques applied in these grades could be easily transferred to the special class situation. The remaining seven teachers specified experience in the elementary grades per se.

One teacher, Teacher N, expressed the view that regular grade experience was an essential pre-requisite to teaching in the Junior Opportunity Class, but it was not in itself sufficient. She did not feel she could stipulate other experiences which should accompany regular grade experience.

A total of seven teachers also expressed the opinion that teachers entering a special class for the first time, namely teachers entering the profession from university, should be involved in an internship program in which they worked with a teacher in the special class in May and June. These teachers, however, still felt that regular grade experience would be more valuable.



Only one teacher mentioned course work in the field of special education. She felt that this was helpful but not as helpful as experience in the regular grades.

As noted earlier one teacher did not respond to this question. She was completing her first year of teaching and felt she could not express an opinion.

The obvious importance with which these teachers view regular grade experience can perhaps be explained by reference to one of the professional characteristics of the teachers described in Chapter 4. All but one of the teachers had taught in the regular grade situation and for twelve of these teachers regular grade experience constituted one half or more of their classroom experience.

### Summary

This section has presented the findings of The Informal Teacher Interview, in which teachers were given an opportunity to express their opinions on certain topics in special education, and to identify certain practices concerned with reading instruction. Despite the fact that the questions were broad and open-ended, the findings in this section point up many similarities in the teachers' stated opinions and classroom practices. That is, while different areas might be stressed within a topic, the range was usually not great, and this was true of the responses to several questions.

Certainly the teachers agreed that the final criterion used in assigning instructional materials was the performance of a student in those materials. Furthermore they indicated that where the assigned





materials proved inappropriate they would change them. The fact that no teacher mentioned the application of specific instructional level criteria when evaluating the reading performance of a student should, perhaps, be considered in conjunction with the finding that many students were reading instructional materials which approximated their frustration level.

The majority of the teachers stated that both word recognition and comprehension were aspects of reading stressed by them. There was a tendency for the teachers to emphasize word recognition, and this emphasis is interesting when it is considered that the teachers made more accurate estimates for the word recognition aspect of instructional level, than for the two comprehension aspects.

The teachers were similar, also, in that the majority organized reading groups to accommodate the wide range of reading ability exhibited by their students. Several teachers stated that it was difficult to organize instruction, specifically reading instruction, when the ability range was so wide.

While fourteen of the teachers indicated a need for further knowledge in various areas related to reading instruction, few teachers belonged to professional organizations, or subscribed to professional journals, sources which might have provided them with additional knowledge.

With the exception of one teacher there was total agreement that regular grade experience should precede special class experience.





## Chapter 6

### SUMMARY, CONCLUSIONS AND IMPLICATIONS

The educable mentally retarded are placed in special classes in order that they may perform at a level commensurate with their abilities, and enjoy a learning environment characterized by success, rather than failure. The task of providing this educational setting rests ultimately with the special class teacher.

Within the context of the instructional reading program, success experiences per se, and success in learning to read are dependent, in part, on the assignation of instructional reading materials which approximate the instructional reading levels of the students to whom they are assigned. The assignation of appropriate materials implies an accurate estimate, by the special class teacher, of the instructional reading level of each student to whom she teaches reading. The major purpose of this study was to determine the accuracy of fifteen Junior Opportunity Class teachers' estimates concerning the instructional reading levels of the EMRs enrolled in their classes.

### SUMMARY OF THE STUDY

To determine the accuracy of special class teachers' estimates concerning the instructional reading levels of their students, the estimates of fifteen Junior Opportunity Class teachers were examined. This was accomplished through the administration of an IRI to



seventy-five EMRs, five being randomly selected from each teacher's class. The specific IRI used was Graded Selections for Informal Reading Diagnosis, Grade One through Three and Grades Four through Six. The readability level of the Smith IRI selection read by each student approximated the readability level of the story reached by that student in the instructional materials assigned by the teacher. A student who met the criteria for instructional level on the Smith IRI was designated as reading at instructional level in his instructional materials. The student's teacher was, therefore, credited with having accurately estimated the student's instructional level. Teachers with four or five students reading at instructional level were designated as accurate estimators. The criteria for instructional level were 85 + per cent accuracy for literal comprehension, and 70 + per cent accuracy for interpretive comprehension. The word recognition criterion for students reading selections at or below the grade three level was 80 + per cent accuracy, while for students reading above the grade three level it was 95 + per cent accuracy.

A second purpose advanced for this study was the identification and description of the professional characteristics of the fifteen special class teachers. A Teacher Questionnaire was devised to obtain information concerning the professional preparation and professional experiences of the teachers. These data were examined to facilitate, (1) a description of the teachers as a group, (2) a description of each teacher, and (3) the identification of professional characteristics which might distinguish the more proficient





estimator of instructional reading level.

The Informal Teacher Interview based on seven questions was held with each teacher. Of the seven questions four were related to the teaching of reading, one to professional activities, and two solicited the opinions of the teachers concerning two aspects of special education. These data were examined in order to identify (1) the procedures used by special class teachers when assigning instructional materials, and (2) opinions and practices which might contribute to a more meaningful interpretation of teachers' estimates.

#### SUMMARY OF THE FINDINGS

The findings of the study are summarized in accordance with the four research questions, and in a section designated as additional findings.

##### Research Question 1

To what extent do special class teachers make accurate estimates concerning the instructional reading levels of the EMRs in their classes, and to what extent do they vary in assigning appropriate materials when word recognition and the two aspects of comprehension are considered separately?

The findings with respect to this question were that special class teachers did not make accurate estimates concerning the instructional reading levels of their students, and that they did vary in the extent to which they made accurate estimates of instructional level for word recognition, and for comprehension.





When the full criteria for instructional level were applied to the reading performance of the seventy-five EMRs a total of seven students were designated as reading at instructional level. No teacher could be designated as an accurate estimator since the seven students were enrolled in the classrooms of seven different teachers. The remaining eight teachers had no students reading at instructional level when the full criteria were applied.

Further examination of the data revealed that fifty-nine students met the criterion for word recognition and, therefore, ten teachers were accurate estimators for this aspect of instructional level. Fifteen students met the criterion for literal comprehension but since no teacher had more than three students meeting this criterion, no teacher was designated as an accurate estimator for the literal comprehension aspect of instructional level. However, the ten teachers who made accurate estimates for literal comprehension, made accurate estimates for both literal comprehension and word recognition. One teacher accurately estimated the instructional level of three students for these two aspects of instructional level.

A total of fourteen students met the criterion for interpretive comprehension. Ten teachers each made one accurate estimate. One teacher with four students meeting this criterion was identified as an accurate estimator for the interpretive comprehension aspect of instructional level. This teacher was also an accurate estimator for word recognition, and was the only teacher to be designated as an accurate estimator for two aspects of instructional level.



The student per cent accuracy scores revealed that there was a tendency among the teachers to assign instructional materials which approximated the frustration level of their students. Five teachers had 40 per cent or more of their students at frustration level for word recognition. Ten teachers had 40 per cent or more of their students at frustration level for literal comprehension, and thirteen teachers had 40 per cent or more of their students at frustration level for interpretive comprehension. Two teachers were identified as having no more than one student reading at frustration level for any of the three aspects of instructional level.

#### Research Question 2

What are the professional characteristics of teachers engaged in the education of the educable mentally retarded?

The findings resulting from this question are presented in two parts: the first relating to the professional preparation of the teachers, and the second to their professional experiences.

Professional preparation. The years of university education reported by the teachers varied from one to six years. Two thirds of the teachers had initially prepared for the profession twenty years previously, whereas, only one teacher had embarked upon initial preparation in the last five years. Efforts to increase initial preparation were reported by thirteen teachers, nine of whom had been involved with university preparation in the preceding ten years.

Degrees were held by seven of the teachers, two of whom held both undergraduate and graduate degrees.





While seven teachers had acquired course work related to the teaching of reading, nine had acquired course work related to special education. It was noted that six of the teachers had course work in both areas while five indicated no course work in either area. Course work related to both reading and special education had generally been acquired within the last ten years. A major field of study was identified by nine of the fifteen teachers. Although the majors were diverse, one teacher reported majoring in reading and two identified special education as their major field of study. Twelve of the fifteen teachers noted preparation for teaching at the elementary level while three reported preparation for teaching at the secondary level.

Professional experience. The number of years of classroom experience reported by the fifteen teachers varied from one to forty years, with twelve of the teachers having taught for more than ten years. Regular grade experience ranged from no experience to twenty-five years. Teaching experience in the special class varied from one to twenty years, although thirteen teachers had experience in the special class which did not exceed ten years. Generally special class experience was confined to Junior Opportunity classes. Once having entered the special class situation the teachers tended not to return to the regular grade situation. Only two of the fifteen teachers had held positions other than that of classroom teacher.





### Research Question 3

Do individual teachers differ in their abilities to assign appropriate materials to their students, and if so do these teachers who demonstrate a higher degree of proficiency, share common professional characteristics which distinguish them from their less proficient colleagues?

In order to answer this question it was necessary that at least one teacher be designated as an accurate estimator of the instructional reading levels of her students. In this study no teacher was designated as an accurate estimator of instructional level. Three teachers, however, did demonstrate greater proficiency in certain respects. These teachers are discussed here.

Teacher J was the only teacher who assigned appropriate instructional materials to as many as three of five students for both the word recognition and literal comprehension aspects of instructional level. This teacher did not exhibit any professional characteristic different from those of the other fourteen teachers. However, Teacher J was the only teacher who organized reading instruction with another teacher. Teacher J and the teacher of the Primary Opportunity Class in the same school regrouped the students in their classes, in order to reduce the range of ability for which each would have to plan reading instruction.

Two teachers, Teachers F and O, were identified as teachers who assigned instructional materials above frustration level more consistently, and more often, than their colleagues. When the professional characteristics of these two teachers were examined it was found that both had acquired course work concerned with



remedial reading techniques. Though other teachers had acquired course work in reading, none specified remedial reading as the content of the course work.

Teacher F was designated, also, as an accurate estimator for both the word recognition and interpretive comprehension aspects of instructional level. Four of the five students from her class were assigned appropriate instructional materials for these two aspects.

#### Research Question 4

What procedures do special class teachers employ when estimating the instructional reading levels of their students?

The teachers reported using a selection of items from the cumulative records of their students when assigning instructional materials. These items varied with the individual teacher. However, all fifteen teachers indicated that the final criterion for the assignment of and continued use of instructional materials was the performance of the student in those materials. No mention was made by any teacher of specific criteria for evaluating the performance of the student when reading the materials.

#### Additional Findings

The following findings are those which resulted from The Informal Teacher Interview, and are presented in the order in which the questions were asked (Appendix B) with the exception of question one which provided the answer to research question four.

Grouping for reading instruction was reported by thirteen of





the fifteen teachers. The number of groups organized by the teachers varied from four to six. Two teachers reported an individualized reading program. All teachers were using readers from conventional basal reading series, although one teacher was using a simplified edition of a series.

All but one of the teachers reported emphasizing both the word recognition and comprehension aspects of reading in their instructional program. There was a tendency, however, for teachers to refer to word recognition in more definite terms.

The teachers identified several areas in reading about which they expressed a desire for further knowledge. The areas identified were: (1) the causes of reading problems, (2) methods of teaching reading, (3) reading materials, (4) phonics, (5) reading tests, (6) the reading process, and (7) the social function of reading in the lives of EMRs.

Generally the fifteen teachers did not belong to professional organizations or subscribe personally to professional journals. Membership in organizations was reported by three teachers and subscriptions to a professional journal by one.

The teachers reported several areas of concern with respect to the present organization of special classes. Some teachers questioned the concept of segregation for EMRs. Other teachers felt more integration with regular grades should characterize the school environment for EMRs. Seven teachers expressed concern regarding the wide range of ability among the students in their classes. They felt





the range of ability should be decreased in order that they could operate more effectively. This was especially true of reading instruction. Three of these teachers also expressed the view that the actual number of children in a special class should be reduced. In other words, they felt the pupil-teacher ratio should be lowered.

There was almost total agreement among the fifteen teachers that regular grade teaching experience should precede teaching experience in the special class. Only the teacher with one year of teaching experience declined to express an opinion. Seven of the fifteen teachers expressed the opinion that a period of internship, in the special class, should also precede special class experience.

### CONCLUSIONS

The findings of this study give rise to the following conclusions:

1. Special class teachers (Junior Opportunity Class teachers) are not accurate estimators of the instructional reading levels of their students, on the basis of the criteria used in this study. They do not always assign materials at instructional level and in some cases assign instructional materials which are at frustration level. This conclusion is similar to that reported by Brown (1966), who used a different IRI, and different criteria for determining instructional level.

2. Special class teachers demonstrate an ability to assign instructional materials at instructional level for word recognition,



which is superior to their ability to assign instructional materials at instructional level for comprehension.

3. Special class teachers use information from the cumulative records of students when assigning instructional materials, but the final criterion for the assignation of instructional materials is the performance of the students when reading from these materials.

4. Approximately one half of the special class teachers believe the range of ability among their students is too wide, and that this makes the task of meeting individual needs a difficult one, especially in the instructional reading program.

5. Special class teachers group for reading instruction and use conventional basal reading series in their instructional program.

6. Special class teachers do not demonstrate a high level of involvement in professional organizations, nor do they personally subscribe to professional journals.

7. Special class teachers generally believe that regular grade experience contributes positively to teaching effectiveness in the special class.

8. Special class teachers tend to remain in special education once they have entered that field.

9. A course in remedial reading may be related to the special class teacher's ability to assign instructional materials which do not approximate the frustration reading levels of their students. Millsap (1962) concluded that a significant relationship existed between teachers' abilities to detect frustration level reading and formal





course work in the area of diagnostic or remedial reading.

### IMPLICATIONS

The findings and conclusions of this study give rise to the following implications:

1. The enrolment of EMRs in special classes represents an effort on the part of educational systems to provide for these children, instructional programs adjusted to their individual needs and consequently success experiences in the learning situation. The failure of special class teachers, as representatives of the educational system, to provide appropriate instructional reading materials for EMRs in Junior Opportunity Classes implies that within the context of the instructional reading program individual needs are not always met, and that failure rather than success may characterize the instructional reading program for many students.

The objectives of special education imply also that EMRs should perform at a level commensurate with their abilities. Cromwell (1961) has postulated that failure experiences tend to depress the functioning levels of EMRs. This would imply that the reading performance of EMRs are not likely to be at a level commensurate with their abilities, but indeed below this level.

Cromwell has hypothesized also that expectancies for failure or success in a certain situation may become generalized to similar situations. Where EMRs develop an expectancy for failure in the instructional reading situation there exists the possibility that





this expectancy may generalize to other reading situations.

2. Generally, special class teachers are more aware of the word recognition aspects of reading than of the comprehension aspects. It is possible that due to this awareness, the word recognition abilities of students may constitute the criteria for placement in instructional materials while the comprehension aspects of instructional level are ignored. If this is the case then there is the implication that EMRs are being prepared as word callers but not readers.

3. The low comprehension scores made by students on the Smith IRI could imply that teachers do not devote sufficient instructional time to developing comprehension skills in their students. However, these scores could also indicate that EMRs do not develop comprehension skills as readily as they develop word recognition skills. Even if the latter statement has some validity, it points up further the need for special class teachers to select carefully instructional materials that foster the development of comprehension skills. Certainly Robert Smith (1968) and Jordan (1967) advocate the development in EMRs of comprehension skills at both the literal and interpretive levels.

4. The findings of this study have indicated that special class teachers are aware that a student's performance in his instructional materials constitutes a valuable criterion for appropriate placement. The absence of any reference to specific criteria for evaluating a student's reading performance may imply that none, in



fact, are applied, and that the assignation of materials is supported by an intuitive feeling on the part of the teachers that the material is appropriate. If this is the case, the results of this study would imply that those intuitive criteria are not sufficient and that special class teachers may need inservice training related to the concept of instructional level and the administration of informal reading inventories.

5. Almost one-half of the special class teachers believed the wide range of ability among their students made the assignation of instructional materials a difficult task. This expressed opinion could imply that some special class teachers assign inappropriate materials to some students in order to create a homogeneity which does not exist. A further implication is that the traditional materials and organizational patterns adopted by the teachers may not be those which facilitate accommodation to the different ability levels of the students. Special class teachers may need assistance in organizing their classes to meet the needs of individual students.

#### IMPLICATIONS FOR FURTHER RESEARCH

The findings of this study have suggested areas for further research. These are now discussed:

1. Special class teachers (Junior Opportunity Class teachers) do not appear to use specific and objective criteria when assigning instructional reading materials. It is suggested that research





efforts be directed toward determining precisely what factors do influence the teacher when she is assigning instructional materials.

2. An awareness on the part of teachers concerning the concept of instructional level, and the procedures and criteria involved in determining this level, may result in more accurate estimates on the part of these same teachers. Experimental studies to determine the accuracy of estimates made by teachers with specific training in instructional level placement and those without it could indicate to teacher educators, and others concerned with the professional education of special class teachers, a specific aspect of reading instruction that needs to be emphasized.

3. It has been suggested that special class teachers may emphasize the development of word recognition skills to a greater degree than they emphasize the development of comprehension skills. Research into these aspects of the instructional reading program as practiced by teachers in their day to day instructional reading lessons could provide insights into the time given to comprehension and the levels of comprehension skills taught. The findings of such investigations could result in guidance for special class teachers in planning instruction which develops in the EMR both word recognition and comprehension abilities.

4. The relatively low comprehension scores made by the students led to the implication that EMRs might not develop comprehension skills as readily as they develop word recognition skills. It is





suggested that research be initiated which would attempt to identify the ability of EMRs to deal with differing categories of comprehension questions at both the literal and interpretive level.

5. The efficacy of special class placement for EMRs is being questioned by many special educators. Studies have shown that these children do not make the academic progress it was anticipated that special class placement would promote. This study has shown that instructional reading materials are not always adjusted to the instructional level of the special class student. In other words, one of the basic assumptions of special class placement, that instruction will be adjusted to the level of the student, is not being met by special class teachers. This would suggest that there is an urgent need for studies in special education which concentrate more upon what is happening in the special class, particularly in relation to the teaching behaviours of special class teachers.

#### CONCLUDING STATEMENT

This study has shown that Junior Opportunity Class teachers do not always assign appropriate instructional reading materials to the EMRs enrolled in their classes, and that frequently instructional materials are assigned which approximate the frustration level of a student. This instructional practice may result in consequences which negatively affect the development of reading skills and abilities in the EMR child, and to some extent, defeat the purposes of special class placement.



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## APPENDICES



APPENDIX A

TEACHER QUESTIONNAIRE





TEACHER QUESTIONNAIRE

Directions

- 1. Teachers holding a degree are asked to complete Section I and Section II of this questionnaire.
- 2. Teachers not presently holding a degree are asked to complete Section I and Section III of this questionnaire.
- 3. Please count this year, 1968-69, as a year of teaching experience.
- 4. Please print all answers.

SECTION I - to be completed by all teachers.

- 1. Which Alberta teaching certificate do you hold? \_\_\_\_\_
- 2. How many years of university have you completed? \_\_\_\_\_
- 3. When did you last attend university as a full time student? \_\_\_\_\_
- 4. If you have held positions within the profession, other than that of a classroom teacher (e.g. vice-principal, consultant, lecturer), please list these below stating number of years for which each position was held, and dates.

<u>position</u>	<u>no. of years</u>	<u>dates</u>
_____	_____	_____
_____	_____	_____

- 5. Total number of years spent teaching in classrooms? \_\_\_\_\_
- 6. Number of years spent teaching in regular grade classrooms? \_\_\_\_\_
- 7. Number of years spent teaching in special education classrooms? \_\_\_\_\_
- 8. In the spaces provided below please indicate the regular grades you have taught and the kinds of special classes with which you have had experience (e.g. Junior opportunity, sight-saving, emotionally disturbed, etc.). Please give dates and number of years where possible.

Regular grades	No. of years	Date	Special classes	No. of years	Date



9. Please list all reading courses and all special education courses you have taken. The additional information is particularly requested. A full course runs for the entire university year or summer session. A half course runs for one university term or three weeks of summer session.

Course number title or description	Institution where course was taken	Full or half year course	Dates	Summer Session Winter Session Evening Credit
1.				
2.				
3.				
4.				

10. If you are planning to attend a summer session this year please list the courses you intend to take.

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SECTION II - for teachers holding degrees.

11. Please list all degrees held and supply the information requested.

Degrees held	Institution where granted	When granted	Major field of study



12. Please circle route followed in B.Ed. program or year of teacher education.

elementary

secondary

If other please specify \_\_\_\_\_

13. How many years of university did you have when you began teaching? \_\_\_\_\_
14. When did you complete these years? \_\_\_\_\_
15. How many courses have you taken since completing your last degree? \_\_\_\_\_
16. If you have any university education or teaching training, perhaps in another province or country, which this questionnaire has not provided an opportunity to present, list these below. Please give details and use the back of this page if the space below is insufficient.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

SECTION III - for teachers not presently holding a degree.

17. How many years of university have you completed? \_\_\_\_\_
18. How many courses do you require to complete a further year? \_\_\_\_\_
19. How many years of university did you have when you began teaching? \_\_\_\_\_
20. When did you complete these years? \_\_\_\_\_
21. How many courses have you taken since completing these years? \_\_\_\_\_
22. Please circle route being followed in B.Ed. program or year of teacher education.

elementary

secondary.

If others please specify \_\_\_\_\_

23. What is your major field of study? \_\_\_\_\_
24. If you have any university education or teacher training, perhaps in another province or country, which this questionnaire has not provided an opportunity to present list these below. Please give details and use the back of this page if the space below is insufficient.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_





## APPENDIX B

### THE INFORMAL TEACHER INTERVIEW



## THE INFORMAL TEACHER INTERVIEW

1. How do you decide which instructional reader you will assign to a student? What information or procedures do you use?
2. Do you group your students for reading instruction and if so how many reading groups do you have at this time?
3. In teaching your students to read are there any aspects of this process that you particularly emphasize?
4. If you were to take a course related to the teaching of reading what course content would be most helpful to you at the present time? In other words are there any areas in which you feel a need for further knowledge?
5. Do you belong to any professional organizations or subscribe personally to any professional journals?
6. Would you like to see any changes in the organization of special classes and if so what are these changes?
7. Are there any professional experiences or aspects of university preparation which you feel constitute essential prerequisites for teaching in the Junior Opportunity Class?



## APPENDIX C

### THE SMITH IRI: SELECTIONS USED AND FREQUENCY OF USE





<u>Selections used</u>	<u>Frequency of use</u>
<u>Smith IRI - Grades One through Three</u>	
A Bed for Fuzzy	1
Something for Susan	5
A New Game	3
The Little Gray Donkey	5
A Warm Coat	8
The Yellow Cheese	9
The Beavers' New Home	1
Dr. Gray's Big Gold Watch	11
Brown Bear Camp	4
The Feathered Airplane	6
Sally's Surprise	12
Johnny Appleseed's Horse	6
<u>Smith IRI - Grades Four through Six</u>	
Jack and June in Congoland	
A Little Jungle Friend	1
Lupe's Wish	
The Mendoza Family	2
Stars Dream	
Star Finds a Bison	1



APPENDIX D

READABILITY LEVEL OF INSTRUCTIONAL MATERIAL  
SELECTION AND SMITH IRI SELECTION:  
REPORTED FOR EACH STUDENT



Teacher	Student	Readability		Teacher	Student	Readability		Teacher	Student	Readability	
		Instruc- tional Materials	<u>Smith</u> <u>IRI</u>			Instruc- tional Materials	<u>Smith</u> <u>IRI</u>			Instruc- tional Materials	<u>Smith</u> <u>IRI</u>
A	1	2.6	2.6	F	1	2.8	3.0	K	1	2.2	2.2
	2	3.0	3.0		2	1.6	1.7		2	2.2	2.2
	3	3.0	3.0		3	2.0	2.0		3	1.5	1.6
	4	1.9	2.0		4	1.6	1.7		4	5.1	5.1
	5	1.7	1.7		5	2.0	2.0		5	5.1	5.1
B	1	3.0	3.0	G	1	2.1	2.0	L	1	1.6	1.7
	2	2.2	2.2		2	1.8	1.7		2	2.1	2.0
	3	3.0	3.0		3	2.6	2.6		3	1.6	1.7
	4	2.2	2.2		4	2.2	2.2		4	3.0	3.0
	5	3.1	3.0		5	5.6	5.3		5	2.0	2.0
C	1	2.2	2.2	H	1	3.5	3.2	M	1	2.9	3.0
	2	2.2	2.2		2	3.3	3.2		2	2.7	2.6
	3	2.5	2.6		3	3.5	3.2		3	2.7	2.6
	4	1.9	2.0		4	3.5	3.2		4	2.1	2.0
	5	2.5	2.6		5	2.3	2.3		5	2.2	2.2
D	1	2.3	2.3	I	1	1.7	1.7	N	1	2.1	2.2
	2	2.3	2.3		2	2.0	2.0		2	3.5	3.2
	3	2.1	2.0		3	1.8	2.0		3	5.1	5.0
	4	1.6	1.7		4	3.0	3.0		4	2.5	2.4
	5	2.3	2.3		5	2.0	2.0		5	3.5	3.2
E	1	2.1	2.2	J	1	2.9	3.0	O	1	3.0	3.0
	2	2.1	2.2		2	2.0	2.0		2	2.1	2.0
	3	1.9	2.0		3	2.9	3.0		3	2.1	2.0
	4	1.9	2.0		4	1.9	2.0		4	2.1	2.0
	5	2.0	2.0		5	1.9	2.0		5	2.1	2.0





## APPENDIX E

### CHANGES TO ORIGINAL QUESTIONS IN THE SMITH IRI



Three questions were changed, and were from two selections contained in the Smith IRI - Grades One through Three.

A Bed For Fuzzy (pp. 30-38)

Literal Comprehension 10

What did Susan say to Fuzzy about going to sleep in the bed?

The word "Susan" was replaced by the word "Mother" since in the text Susan did not make a comment, but Mother did.

Interpretation Question 10

Do you think Mother would have let Fuzzy sleep in the bed?

The word "Mother" was replaced by the word "Bill", since the Mother had already expressed the view that Fuzzy, the kitten, could not sleep in the bed. An affirmative response was indicated.

The Feathered Airplane (pp. 142-153)

Interpretation Question 2

In what part of the country do you think Janet and Pat lived? Why do you think so?

The response to this question required the naming of one of two states in the United States. This question was rephrased as follows:

What was the weather like where Janet and Pat lived?  
Why do you think so?

Although the first part of the original, and the rephrased question, called for different responses, the second part did not.



## APPENDIX F

### INSTRUCTIONAL MATERIALS USED BY EACH TEACHER





<u>Series</u>	<u>Edition</u>	<u>Teachers</u>									
The New Basic Readers, Curriculum Foundations Series, Scott Foresman.	1953	A									
The New Basic Readers, Curriculum Foundations Series, Gage.		B				G		K	L		
Basic Readers, Curriculum Foundations Series, Gage.				D						M	
Ginn Basic Readers, Ginn.	Rev.ed.	A	B	C	D	F	G	I	J	L	N O
The Canadian Ginn Basic Readers, Ginn.	1962					G		K		N	
Ginn Basic Readers Enrichment Series, Ginn.	Rev.ed.							J			
Sheldon Basic Reading Series, Allyn & Bacon.	1957			C		H		J		N	
Sheldon Basic Reading Series, Allyn & Bacon.	1964			C		H				N	
Easy Growth in Reading, John Winston.	1940					G				L	
Reading for Meaning, Houghton Mifflin.	1957					G		K			
Reading for Meaning, Nelson & Sons.	1958					G				M	
Reading for Independence, Gage.							H				
The Developmental Reading Series, Classmate Edition, Lyons & Carnahan,	1962						E				
Reading Development Series, J. M. Dent & Sons.	1944				D						



<u>Series</u>	<u>Edition</u>	<u>Teachers</u>
Jim Forest Readers, H. Wagner.	1959	E
Crabtree Basic Readers, Lincoln University Pub. Co.	1940	G







**B29997**